PHOTO-ERA

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Architecture of the Renaissance

EDWARD LEE HARRISON

THE Renaissance! Age of romance, black art and chivalry! The mists of legend swirl and eddy, rising ever and anon to disclose a flashing vision. Here, it is a monastery, gray and silent upon a bleak and snow-swept hill, with the shivering monks going silently about their daily drudgery. Anon we see a baronial castle, turreted and embattled, with a glittering train of knights and ladies issuing from the grim portcullis intent upon hawk and hound, and over their heads we catch the glint of the sun from the watchman's headpiece, and glimpse the flash of color thrown by the blowing pennons on the keep.

Monk and prelate, soldier and knight—each hated the other and his mode of life. Possibly at no time in the history of the world do we see such grinding poverty and cruel laws, balanced against such wanton luxury and such fantastic chivalry. The Renaissance fused their interests and began the awakening which led to an abatement in the hard lot of the serf, an increase in the comfort of the craftsman, and which—as some think—will one day terminate in the brotherhood of man.

Men were no longer content to sit in a darkened hall, half choked by the smoke from chimneyless fires and shivering in the draft from unglazed windows. The law increased in power, and with it a sense of security in the ownership of property was felt and this encouraged the expenditure of gold upon the home.

Then, men began to think upon beauty of design in addition to comfort, and there arose a line of artists who, disregarding in part the classical traditions, built boldly upon them or above them, and designed architecture upon original lines. Their names are legion, their work in many cases obscured by the ages. A few of the greater lights alone pierce the darkness. Michelangelo, Vignola, Palladio, Wren, we know their names and a half-score more; but their work, except in a few instances, has perished.

Yet, its influence is felt, and we build to-day upon the architectural framework that they established. Possibly no style of architecture to-day is more often misquoted or chosen than that of the Renaissance-period and this fault is not confined to the amateur. Experienced designers will disagree upon the periods of design, and that not infrequently. The general trend of such modern designs is undoubtedly Italian in character. The towering genius of Michelangelo centered the Renaissance-period in Italy although the movement was universal in character.

The popular "Italian Villa," of which our country estates are so enamored, is typical of the fact. The style is of universal application; but the residence use is at present most common. The somewhat elaborate character of much of the material may be in part responsible for this; but it is a fact that few satisfactory monumental buildings have been evolved in pure Renaissance-style. Of course, the Italian garden must receive its due, and this favors also the residence-work.

The photography of Renaissance-architecture offers many difficulties. In the first place, the mongrel nature of many of the so-called periods is confusing, and the white effects so widely copied from the Italian are quite trying. The salvation of the matter, so far as residence-work is concerned, lies in the relief offered by foliage and garden-settings. This has saved many a whited-sepulcher-effect, and when assisted by a ray-filter and a sky filled with clouds, it has been known to produce both effects and dollars.

In some public-building work, particularly if brickwork is prominent, the effect is not so bad. The elaborate nature of much of the ornament, the abundant relief and the involved nature of the shadow-work, make good photograph-material. The one we fear is the plain, white marble-façade with about two bas-relief panels of the same material. This kind requires native ingenuity and a lot of lucky shadows. Once we

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ITALIAN RENAISSANCE FAÇADE — EDWARD LEE HARRISON

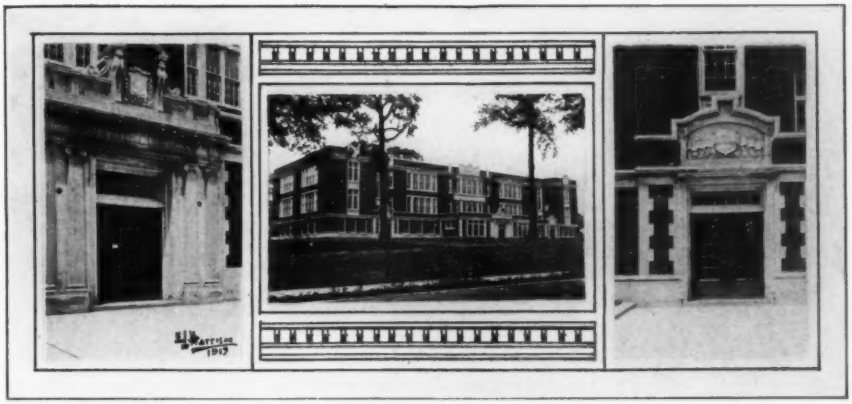
waited around a memorial art-building for half a day, waiting for some good-natured trees to cast their friendly shadow-mantle over its glaring walls; but we obtained the order, so that it was worth the trouble.

Light and shade are the stock in trade of the photographer; yet a cloudy, bright day when the light searches every angle of the moldings and ornaments of the buildings and garden-pieces, is most favorable of all for this style. Wiry sharpness is desirable in much of the work, and a good group of griffons, lions or other mystic monsters, well set off against a good background or a stormy sky, will tickle the fancy and the artistic palate of many a prospective client.

Once there was an exceedingly flat, white marble-façade owned by an old gentleman of great wealth, and there were many poor photographers who essayed to make a photograph thereof which they could sell to the owner. They could make the photograph without difficulty, but they failed on the second, and—to the photographers,—most important part. Well, there was an amateur in the same town who was experimenting with some ray-filters; and one day a storm-cloud that he wanted appeared just over the aforementioned house just as he walked past. He made an exposure of the cloud, house and all. One of the aforesaid poor photographers developed the amateur's film, enlarged the same and sold it to the old gentleman who owned the house under the cloud, and collected the shekels therefor. We forget what the amateur received for his film, but it was not very much, and he had to take it out in trade, at that. We know, because we were "him!" That may not be good grammar; but it's life.

As to interiors, the richly carved and paneled architecture of the Renaissance offers unlimited opportunity to the artist. The number of consoles, dadoes, panels, fluted columns, gargoyles and such that can be crammed into a room of average size is little short of marvelous. Yet with a wide-angle lens and a 500-watt blue nitrogen-lamp, a man may make a living out of the matter. We have found the lamp better than the flash, especially if the lady of the house is at home. With a good roll-film instrument with a wide-angle lens, one is able to do good work, and it is more portable than the plate-outfit. Of course, a reflector is required for the mazda lamp; but it can be a white-linen collapsible one, and the tripod needed is the smallest that money can buy.

Possibly, the most pleasurable feature of the photography of Renaissance-architecture, as handled by our American designers, relates to the garden and landscape architecture. Here, the imagination and taste of the artist are less hampered than in the building proper. The photographer will find in these features the material to work up many beautiful studies. The



RENAISSANCE PUBLIC BUILDING
ITALIAN RENAISSANCE GARDEN-SKETCHES
EDWARD LEE HARRISON

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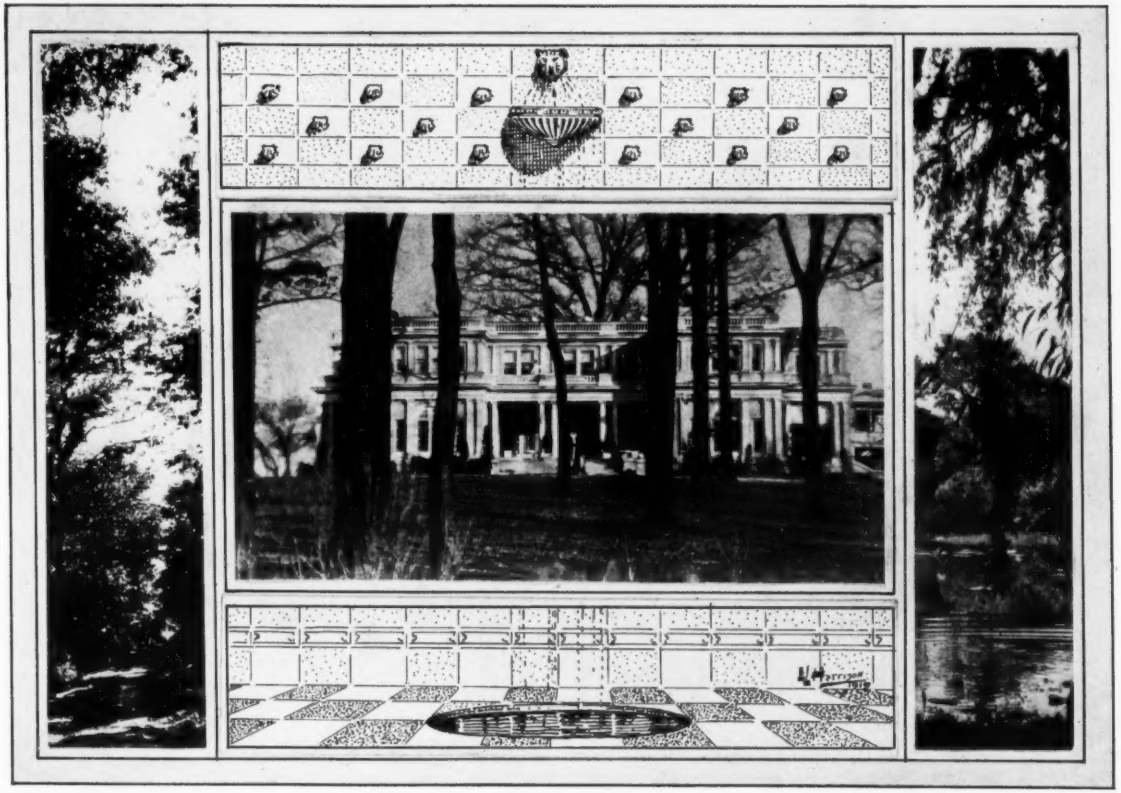


ITALIAN RENAISSANCE VILLA AND GARDEN

EDWARD LEE HARRISON

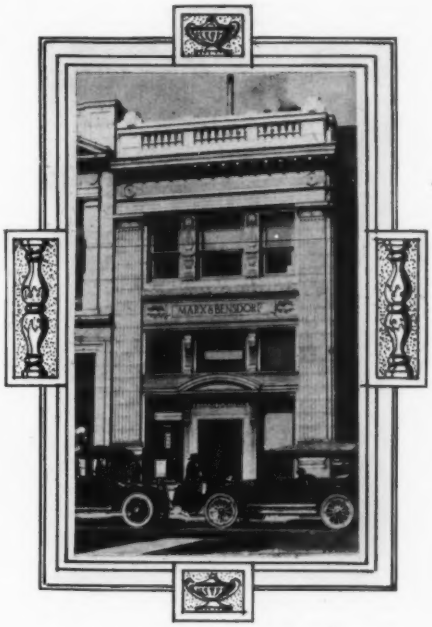
architect and the designer of the grounds and gardens will demand well-studied views of the entire estate, as well as of the main building. Shrubbery, vases, walks and drives, statuary, fountains and pools, rest-houses, arbors and pergolas—all will tax the equipment and ingenuity of the artist. Many owners have a favorite "vista" they wish featured. We have never yet found a satisfactory definition for this word; but according to our experience it may be anything, from a concrete-drive between two rows of beech-trees, to a footpath over the hills, with a red cow in the distance. At any rate, it must be photographed.

White statuary nestling cozily amidst green shrubbery is frequently provocative of much strong language, as also is colored mosaic and faïence work, especially when the predominating colors are yellow and blue, and the designer insists on bringing out "that little bit there in the center." In such cases we recommend much study of the book on filters, and a good drink of something cheering, before the work is undertaken.

A reflecting-camera is very convenient to carry around in the garden, especially if the estate be about ten miles in circumference, the thermometer at a hundred, and the reflex strongly and substantially made. A view-camera will do the same work if you do not care about your hair being mussed up by the focusing-cloth. It is especially convenient for those that have no hair, as the cloth keeps off the sun. In the case of large municipal projects, or country-estates of a size to warrant the expense, a Cirkut outfit is invaluable. In lieu of this, a wide-angle outfit of first-class optical properties can be used, and the views enlarged.

The subject of ray-filters is well deserving of more study than we generally give to it. Many of us do not know that with a certain filter the scratches in old interior trim and furniture can be obliterated in the picture; and that there is a screen that will render—in their proper monochrome-relation—the bit of inlay-work in the center panel of the museum, consisting of a flaming red dragon being subdued by a very blue St. George. A dozen first-class filters, some orthochromatic plates and films, and a little time devoted to experiments will work wonders. And, if it is really desired to get into the subject, panchromatic and Lumière plates and Wratten filters should be given a trial.

One of the most successful recent issues of a prominent architectural magazine contained a number of views made by a talented photographer that showed a country-estate of considerable magnitude. The pictures were remarkable for the beauty of their composition and correctness of the color-rendering. The first was a bird's-eye panorama of the entire estate. This was followed by a view of the mansion and its immediate surroundings photographed against a magnificent set of billowy, white clouds, which was one of the nicest bits of photography I have yet seen. Then came views of the pergola, details of the entrance and the cornices, garden- and ground-details, and studies of the drives and walks. There was a rose-covered trellis, a bit of statuary reflected in a crystal pool, and some vases balanced into an effective bit of composition. The set was closed by a "moonlight-scene," made by underexposure and evidently retouched a bit; but the whole set was without question one of the most successful I have lately seen In addition to his magazine-fee, the artist sold a number of tinted enlargements to the owner, a complete set of views to the landscape-designer, and finally a luxurious edition bound in leather to the architect of the estate, who was very proud of his work and wished to do a little quiet advertising at his club. And pictures are good advertising.



FLEMISH FAÇADE E. L. HARRISON

THE RIVER-ROAD — ALLEN E. CHURCHILL

Sunshine and Shadow

ALLEN E. CHURCHILL

PERHAPS readers of PHOTO-ERA remember an article I wrote on winter-photography that appeared in the March number. Both text and illustrations were put together in such a way that they would prove my contention that there were as many opportunities to make interesting pictures in winter as in summer. If any dependence can be placed on the criticisms of my friends, it would seem to indicate that I had succeeded in my efforts. One of them told me that the pictures were "the snowiest things he had ever seen—that every time he looked at them, chills ran up and down his back."

It is no more than fair, however, that I should give credit to Mr. French, Publisher and Editor of PHOTO-ERA MAGAZINE, for his assistance and coöperation to make the article appear at its very best. The illustrations were the most remarkable examples of photo-engraving I have ever seen! As a matter of fact, I am mystified how such sharp, clear reproductions could be made by the halftone-process. I regard Mr. French's choice of an engraver a master-stroke of good judgment.

Winter and spring are now seasons of the past, for summer has arrived, bathed in sunshine and bedecked with flowers. Long, sunny days that reflect, as in a mirror, nature's rich colors, are now with us. It is, therefore, high time that amateur photographers who strive seriously for the best results should be up and about in eager search of new subjects to photograph. I have chosen landscapes for the reason that I think that they are the most beautiful creations of nature—appealing, as they do, to the artistic sense and imagination, arousing an interest that is irresistible among those who understand and are able to appreciate them. Another reason is that they are both abundant and accessible. On many oc-

casions, as I roamed about the country-side, a sharp turn of the road would disclose many views of most exquisite beauty.

As a result of experience, I write this article with the intention to illustrate the charm of summer-photography. Also, to suggest, for the benefit of those who aim at the highest standard of excellence, a method which the best amateur photographers throughout the United States are employing and which has enabled them to obtain superior results technically and artistically.

harmonize. Study nature attentively. Amateur photographers who follow the line of beauty, produce the best results.

I shall now give a few suggestions on the subject of the apparatus to be used. After many years of experience, during which I have tested various types of cameras, I have chosen the view-camera as the nearest thing to perfection. The most convenient model I have found to be a light, yet strong, 5 x 7 camera equipped with a long bellows as nearly square as possible, a double

THE WOODLAND-BROOK ALLEN E. CHURCHILL

Before explaining the practical part of photographing landscapes, I should like to devote a few lines to a subject that demands an understanding of how to construct pictures in proper balance. This is known as pictorial composition. Ask an artist what the meaning of composition is and he will tell you that "it is the science of combination." Imagine a landscape that has for its component parts a group of cattle grazing in a field, a farm-house surrounded by trees, and a range of hills. If these several objects are put together indiscriminately, regardless of balance, they do not make a picture. Not until they have been properly arranged and grouped do they

swing-back, and a rising and falling front-board. One should be sure to select a substantial tripod that will not wobble in a gale of wind, and to remember always that in photographing landscapes one encounters obstacles frequently that interfere with the work in hand. A little common sense and a thorough understanding of the different parts of the camera will overcome all difficulties.

A few words on the use of the lens with regard to the size of diaphragm. I have often heard artists praise "fuzzy-wuzzy" paintings and talk about atmosphere and a lot of other terms used only in studios; but when it comes to showing

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them fine, sharp, well-balanced photographs with plenty of detail they generally sit up and take notice, exclaiming, "That's beautiful!" Is it not strange how detail attracts equally those who understand it and those who are untutored? My most successful landscape-photographs have been made with a lens aperture of F/32. I find it best to employ a fixed aperture wherever light-conditions will permit. To follow this plan with discretion, eliminates a great deal of calculation as to what exposure to give. It soon becomes a simple matter to calculate the correct exposure by looking at the subject carefully. Thus the likelihood of errors is reduced. Virtually the only exception to this rule occurs at times, late in the afternoon, when the light loses much of its actinic quality. This does not interfere with success in any way so long as foreground and infinity are within reasonable distance of each other. The diaphragm may be changed to F/16 with no apparent loss of definition.

One important item that must not be overlooked, is to focus the subject equi-distant between foreground and distance, and to avoid as much as possible large and obtrusive objects near the camera. In connection with removing them in short order, I will introduce the reader to a little photographic accessory that I picked up a number of years ago and which I am never without on my rambles. Safely tucked away in my trouser-pocket is a strong, sharp jack-knife and a neat little saw that telescopes itself into a skeleton-handle and is held in place by a thumbscrew. Many times, I have worked for an hour or so and, when I had finished, I had constructed a picture.

NATURE'S MIRROR — ALLEN E. CHURCHILL

With regard to the best type of plates, I would advise a medium fast orthochromatic such as the Standard Orthonon, Cramer Isonon, and the Seed C and L Ortho. These register 90 on a Wynne exposure-meter and have sufficient speed to permit fairly short-timed exposures when made under normal conditions. Their color-sensitive qualities are quite sufficient to present summer-colors in correct and pleasing gradations. Results, truer to nature, may be obtained by the use of a Wratten and Wainwright K 1 filter which does not lengthen the time of exposure to

THE ROAD TO HAPPY VALLEY — ALLEN E. CHURCHILL

any great extent. Full, but not excessive exposure, should be given, so that a normal developer will do its work evenly to a point where opacities and intensities reach their correct relative values. At this point in the developing they should be removed quickly and placed in the fixing-solution. If these directions are carried out, the result should be a perfect negative.

Futile Attempts to Extract Detail

THERE always has been—and we suppose that there always will be—a tendency among a certain class of amateurs to coax detail out of an underexposed or underdeveloped negative, where really none exists. Commenting on this forlorn hope, *The British Journal* speaks editorially as follows: "We constantly hear photographers inquiring for a formula for an intensifier that will bring out undeveloped shadow detail. These do not realize that what they seek is impossible. If such detail as is in the film of the plate is not brought out by development it is lost forever. Intensification will add to the printing density of the negative, but it cannot bring out in the film what has never been recorded during the exposure or lost through underdevelopment. To our mind, under ordinary conditions, intensification ought never to be needed. A full exposure should be given, and the operator should know his developing-agent and the requirements of the printing-medium well enough to be able to produce a negative of just the right quality, every time. It is only when it is required to add to the density of the negative in order to fit it for another process that intensification should be required, and even then it is quite easy to overdo this latter process and to produce a negative of excessive contrasts. A good plan, when requiring some extra printing-quality in a soft negative such as is made for contact bromide printing or enlarging—when prints in carbon or other process demanding a more vigorous negative are to be made—is to bleach and sulphide the plate as in sepia-toning prints. The result is that the negative is toned to a sepia which gives a greatly increased printing-value. A moderate degree of intensification is obtained without the possibility of spoiling the plate that is always more or less existent with the mercuric processes."

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The Voyage of the Mayflower

WILFRED A. FRENCH

IT is just one year ago, this month, that PHOTO-ERA published for the first time in America F. J. Mortimer's historical photograph, "We are Ready Now!", which pictures the first active participation of the United States in the present European war, the arrival in British waters, on May 4, 1917, of the United States fleet of torpedo-boat destroyers followed immediately by the main American fleet. Thus, a particularly brilliant page has been added to American history through the courtesy and the artistic skill of an English photographer.

It is this same F. J. Mortimer who has put in the form of a composite photograph a scene that led to the foundation of a colony in a far-off land and which, eventually, developed into a great and powerful nation—the United States of America. The culmination of the voyage of the ship, Mayflower, whose departure from the shores of England, on September 6, 1620, has been pictured with superb artistry by Mr. Mortimer, was the landing at a place afterwards called Plymouth, Massachusetts. This event, known as the Landing of the Pilgrims, will be celebrated on its three-hundredth anniversary, a year from next December, anticipating which, PHOTO-ERA takes exceptional pride in publishing at this time—the significant month of September—a pictorial representation of the departure, from England's shores, of the Mayflower.

Although the story of the voyage of the Mayflower is not one that makes a strong appeal, it will appear in elaborated form, and at the proper time, in every newspaper and magazine in this country; yet a brief sketch may not be inappropriate in connection with our picture.

With regard to the Pilgrim Fathers, who were the earliest settlers in Massachusetts, and who made famous the boulder known as Plymouth Rock, they constituted an independent faction of the Puritans who had separated from the Church of England. Seeking the religious freedom that was denied them in their own country, they went to Leyden, Holland, whence they emigrated to America. They actually sailed from Southampton, England, in the ships Speedwell and Mayflower; but as the Speedwell was discovered to be unseaworthy, they put into Plymouth. Here the passengers of the Speedwell were transferred to the Mayflower, which craft set sail for the shores of New England, September 6, 1620. The party numbered fifty-six men and forty-six women, and included Miles Standish, William Bradford, Isaac Allerton, William Brewster and John Carver, who afterwards figured prominently in the early history of the Plymouth Colony. The Mayflower arrived eventually off Cape Cod and, on November 11, dropped anchor at Provincetown, where, in the cabin of the little vessel, the famous compact was signed by the Pilgrim Fathers. Seeking a place for settlement more sheltered and promising than Cape Cod, a small party which included Miles Standish and William Bradford set out in a westerly direction and, on December 11 (December 21, N.S.), set foot on Plymouth Rock. This event is celebrated as Forefathers' Day, December 22, eleven days having been added to the original date when the anniversary was first instituted at Plymouth in 1769.

With affection and honor, the Pilgrims remembered the little Devon town in the name which they bestowed upon the spot where they set up their worship in the wilderness. The identical rock or boulder upon which Miles Standish and his sturdy band of Pilgrims first set foot is preserved intact, resting securely beneath a high granite canopy, not far from its original site, and several feet from the water's edge, in the town of Plymouth, Massachusetts. This monument has been a Mecca to loyal Americans everywhere, and during the period of the grand historical drama that is to be enacted next year, it will be the chief object of interest. In order to preserve historical accuracy, it is planned to restore Plymouth Rock to its original resting-place in the harbor by replacing the present wharves with a sea wall supporting a classic granite-portico, below which, and visible from above, shall repose the historic boulder. As to the photograph by Mr. Mortimer, it is a performance of supreme artistic beauty and impressiveness. Only an artist imbued with poetic imagination, historical knowledge and rare technical ability could originate and interpret so noble a theme. It seems strange, and somewhat paradoxical, to behold a photographic representation of an episode that occurred over two hundred years prior to the invention of photography; and yet what the painter can create from the recesses of his brain, seems not beyond the scope of the artist-photographer. Here we have not the Mayflower, but a craft of her type. Probably, the same cliff from which friends bade God-speed to the doughty band of Pilgrims, the same expanse of water and the same promising sky were available to the resourceful English photographer.

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THE DEPARTURE OF THE MAYFLOWER

F. J. MORTIMER, F.R.P.S.

Repairing Broken Negatives

BENJAMIN F. WELCH

WHAT can there be more annoying than to see a cherished negative lying on the floor in pieces, and how often, I wonder, are those pieces confined to the waste-bin. Tempers are ruffled, customers disappointed, orders, money and business lost; yet, with a little manipulation, the effect of a broken-negative catastrophe can be overcome. All the necessary materials for overcoming can or should be found among any photographer's equipment. These materials consist of two or three grades of retouching-pencils, a retouching-knife or two, and some spare plates of medium rapidity.

The method of procedure is as follows, and with ordinary skill the damage can be repaired.

First retrieve from the floor or other resting-place all the pieces of negative, and then carefully piece them together on a clean piece of glass of a size larger than that of the broken negative. For instance, if one is repairing a half-plate negative, then 5 x 7, or even whole-plate (6½ x 8½), should be used. Having pieced the broken pieces together, next fasten the outer edges securely to the glass bed by narrow strips of adhesive binding, taking care that other pieces inside are not moved out of position. Our next step is to make a transparency on a medium speed of plate somewhere about H and D 150–180. Transparency-making is not at all a difficult undertaking provided one does not "get the wind up" by using too strong an illuminant for making the exposure. I have made hundreds of transparencies by means of an ordinary match—a wax vesta is ideal. Of course this method is open to criticism, so there is no hard and fast rule why one should adopt this method, but I give it here as a guide for those who are not used to the making of transparencies. The bound-up negative should be placed in a printing-frame with an unexposed plate in contact with it, film to film. It is a good plan to lay a narrow strip of glass around our bound-up negative in the printing-frame to equalize the pressure when the back is put on and fastened down, thus preventing undue pressure on the center of the frame. Without these strips there is a tendency for the cover to crack, thus adding to one's annoyance by a double catastrophe. Having filled the frame, stand it end up on the edge of the dark-room bench. Now strike a match, shielding the direct rays from the frame, and when the match is fully alight move it in a circular motion about six inches away from the frame so as to ensure as even an illumination as possible. Should one part of the negative be denser than another, the match can be held closer to and opposite the particular part for a moment or two longer than the remainder.

Remove the exposed plate from the frame and develop in any non-staining developer, the borax metol-quinol formula of Messrs. Wellington and Ward being very suitable, as it produces negatives and positives of a very fine grain and free of fog or stain. For those who may not have a copy of the formula, I give it here:

Water (hot).....	20	ounces or	500	c. c.
Borax (powdered).	200	grains or	10	grammes.
Metol.....	20	"	1	"
Hydroquinone.....	50	"	2.5	"
Sodium sulphite...	200	"	10	"

Dissolve in the order given, allowing each chemical to be in complete solution before adding the next. This developer keeps, by the way, almost indefinitely in well-stoppered bottles. When our positive is fully developed, fix and wash in the usual manner.

Of course, our positive will show the cracks and lines of breakage; but it is here where the only skill required will come in, and this with the use of a retoucher's knife and pencil. The pencils I prefer are grades 2 and 3, and for work that requires a good black deposit a No. 1 will be useful. The knives most suitable are Nos. 1 and 2, and for fine work a No. 4 is handy to have by you, although a great deal of the work can be done with the first-mentioned grades.

Place the positive on a retouching-desk, and with the knife most suitable for the purpose remove carefully the black lines until they are of the same density as the other surrounding parts. This action of reducing the density of these black lines is by the gentle and light process of scraping the film of the positive. On no account should any pressure be used on the knife, otherwise the work will produce a series of rough scratches resulting in an uneven printing-density. Take great care not to remove all the gelatine film when scraping, otherwise one will find it very difficult to apply the pencil there afterwards, if necessary. Having got rid of the black lines, cover the negative with retouching-medium and fill and even up the white spaces with the retouching-pencil, preferably by means of cross-hatching. If the crack has extended across the face, carefully remove the blemish first with knife, finally finishing off with the pencil. When the positive is worked up and retouched to your

DOWN TO EARTH HAROLD A. TAYLOR

satisfaction, varnish it with a good hard-drying negative varnish. By varnishing a negative, one not only protects the film from further damage, of scratches, etc., the varnish also tends to even up any work that has been done with either the knife or pencil, and makes it less noticeable in the new negative when made.

A new negative is made by repeating the method adopted for making the contact positive —barring the necessity of fastening the same down on a cover-glass. If the knife and pencil work has been done carefully on the positive, our new negative should require very little after-work. Should such work be required, repeat the method of treatment of the positive, and, as before, finally varnish.

With a little practice on some old negatives it is astonishing what can be done in shorter time than it takes to describe. The whole process is very simple, and an intelligent retoucher can soon convert what appears to be a total loss into an article of value once more.

I might mention here that, however carefully the work might have been done, the final negative sometimes looks a little uneven in density owing to the black color of the pencil-work printing a different tone to that of the negative in general. For contact work this is not very detrimental, as the print can be evened up easily in the final spotting; but if enlargements are required, the handwork may be rather pronounced.

Should enlargements be required, make a print on glossy bromide about half the size of those required, match up some spotting-color (to which a little gum water has been added) to the exact tone of the glossy print, and carefully spot same, preferably with the aid of a magnifying-glass. When completed, copy in the ordinary way.

The British Journal.

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A System for the Tank

FREDERICK C. DAVIS

THOSE who have read my two previous articles, giving short and simple systems, the first to stop motion, and the second for exposure-calculation, will wonder if this system of systems could be carried farther into the realm of photography. That, at first, does not seem probable, since exposure, including the stopping of motion, is the greatest problem of photography. However, I have discovered another piece of photographic apparatus upon which a system can be built, and to advantage, too. I refer to the film-tank.

If you will look at the lid of your film changing-box, you will find a table, which gives the length of development for the proper strength developer, between the temperatures of forty-five to seventy degrees. These temperatures are the limit of the best working of the developer. Every time you use the film-tank, you must refer to this table, to see exactly how long to develop at that certain temperature.

Well, I was once dependent upon such a table. Then gradually the table became unreadable from many dabs and splashes of the various baths. I was running a risk of losing the table, and if the table was lost, it would be necessary to guess at the length of time of development, and that would, in all probability, result in a spoiled film. So I sat down and for the third time figured out a system. This little system, unlike the other two, has no tables whatever to memorize, only a simple formula. Perhaps it would be well to explain how this formula was worked out.

The highest temperature at which the developer should be used is seventy degrees, Fahrenheit, because at that point, there is danger of frilling. The lowest point at which the developer will dissolve, and at which the developer will act advantageously, is forty-five degrees, Fahrenheit. There is a range of twenty-five degrees between these two limits.

At seventy degrees—aided by heat—the development is speeded up, and complete development is obtained after fifteen minutes immersion. At forty-five degrees, the time is forty minutes, almost three times as long. There is therefore twenty-five minutes difference between the longest and shortest times of development; and, since there are also twenty-five degrees between the highest and lowest temperatures, we may assume that for each degree of heat difference there is a difference of one minute in the developing-time. This is absolutely correct, as the following table shows. This table is a copy of that which is supplied with the tanks.

Temperature			*Time Required*		
70 degrees			15 minutes		
69	"		16	"	
68	"		17	"	
67	"		18	"	
66	"		19	"	
65	"	Normal	20	"	Normal
64	"		21	"	
63	"		22	"	
62	"		23	"	
61	"		24	"	
60	"		25	"	
59	"		26	"	
58	"		27	"	
57	"		28	"	
56	"		29	"	
55	"		30	"	
54	"		31	"	
53	"		32	"	
52	"		33	"	
51	"		34	"	
50	"		35	"	
49	"		36	"	
48	"		37	"	
47	"		38	"	
46	"		39	"	
45	"		40	"	

You will see from this table, that the colder the developer gets, the longer it requires for the complete action of the developer to take place. This is based on a law of physical phenomena, known as the Kinetic Theory, by which it is assumed that all substances are composed of molecules, which vibrate, and the more heat that is applied, the faster the vibrations; the greater the velocity of these molecules, the greater the chemical activity; and thus, more heat, more activity, through logical conclusion.

The time, as I have said, at seventy degrees, is fifteen minutes for complete development. At sixty-nine degrees, one degree lower, the time is sixteen minutes, one minute more. At sixty-eight degrees, the time is seventeen minutes, and so on, so that we see that for each degree of heat-difference, there is a difference of one minute in the time taken, and that the time of development is longer as the temperature decreases, until at forty-five degrees, the time is forty minutes. The temperature of sixty-five degrees is considered as normal, and the time for this temperature is considered normal time, twenty minutes.

Now, in all systems of measuring heat, such as the Centigrade and the Fahrenheit, there is, of

From the National Parks Portfolio

FLOWERS AND THE MOUNTAINS, MOUNT RAINIER NATIONAL PARK

CURTIS AND MILLER

course, a zero. The zero on the Centigrade corresponds to the mark thirty-two on the English Fahrenheit scale. These two zeros can be made to coincide in number by subtracting thirty-two from the Fahrenheit scale. The lowest temperature we are to use is forty-five degrees, so that must be our zero. Then, to convert any Fahrenheit temperature into our system-scale, we have merely to subtract forty-five degrees, when we will have the number of degrees that temperature is above our system zero.

For instance, the temperature of sixty-five is twenty degrees above our zero, by merely subtracting forty-five from sixty-five. Now, the longest time required for complete development, is reached at this temperature of forty-five degrees, so that we must also consider this. The temperature of seventy gives fifteen minutes. Thus, if we subtract fifteen from any developing-time, we find that the amount of time-difference between the faster and the slower time is with the temperature.

Therefore, by substituting all the factors for words expressing them, we have the following conclusion: the time of development is equal to the number of degrees above the system zero-mark, minus the system zero, minus the difference between the zero-mark and the temperature of the solution. Needless to say, it is highly important that care be used in order that the best results may be obtained from each and every exposure. This may seem rather complicated, but it is simple, as you can see when it is expressed in the form of letters, algebraically:

t minus 45 equals *a*.
40 minus *a* equals T.

where *t* equals temperature of the developing-solution, *a* is the result of the first subtraction, and *T* is the time of development. To make the understanding clearer, let us have some examples.

Let us suppose that the temperature of the developer was sixty-seven degrees. Subtract forty-five, according to the formula, and the answer will be twenty-two. Now, forty minus twenty-two is eighteen. Eighteen minutes is the time of development. You can see that the system is very, very simple.

Another example: Temperature is fifty-six. Subtract forty-five, we have eleven. Subtract this from forty, we have twenty-nine. Twenty-nine minutes is the time of development.

Another: Temperature, sixty-five; difference, twenty. Forty minus twenty is twenty. Twenty minutes for development.

You will see that this system will be of much help. It does away with all fear of losing the table or obliterating it. Once the why of the formula is understood, it is not easy to forget. You have merely to subtract forty-five from the temperature, and subtract the answer from forty.

I have used this system for several months, and the results are exactly the same as those when the manufacturers' table is used. If two developing-powders are used instead of one, making the solution twice as strong, divide by two.

True vs. Eccentric Pictorial Photography

WILFRED A. FRENCH

PRINTING and pictorial photography are acknowledged to be sister-arts. Obviously they have much in common. According to James Paston Haney there can be no art without an audience which understands it and sustains the artist. How true this is of pictorial photography at its best, is known to organizers of strictly high-class photographic exhibitions. It is also sad, but true, that many a promising exhibition of pictorial photographs has been killed by the committee of selection when it was composed of amateur photographers known to entertain abnormal views on the subject of art in photography. No fault can be found when these individuals hold exclusive shows of their own, and try to interest lovers of anything that bears the stamp of a morbid and disordered imagination. But when these extremists, in the capacity of judges, invade the field of sound and attractive pictorial expression, and accept every print that bears the symptoms of an eccentric personality, to the exclusion of soundly artistic work, they hinder the progress of laudable pictorial activity. Fortunately for the cause of true photographic art, this coterie of eccentric disturbers seems to have spent its evil influence; and it is sincerely to be hoped that those who have the future stability of pictorial photography at heart, will discourage the recognition, in any form, of its avowed enemies. Moreover, every believer in truly pictorial photography should help his uninitiated friends, whether camera-users or not, to appreciate the artistic merits of a sanely conceived and delightfully executed pictorial photograph, and to attend and to encourage eminently desirable photographic exhibitions, whether local or national.

THE CONFERENCE — LEHMAN WENDELL

Nature-Studies with a Camera

LEHMAN WENDELL

NATURE–STUDY photography is filled with interest. If you have never spent a day close to the heart of nature in search of animal and plant life, you do not know what you have missed. To go out into the woods, to be surrounded by pure air, the trees, the flowers, and the sweet fragrance that springs from a hundred plants, and to enjoy the hum of the insects and the songs of the birds—that is an experience eminently worth while.

One of the principal charms of this branch of photography lies in the fact that there is never that wearisome sameness so often associated with ordinary branches of photography. When you have made a nature-study with your camera, you know that there is little danger of someone else repeating that idea. How different this is from ordinary snapshot-work. If you photograph some public or historic building, or some beauty-spot in a city-park, hundreds of others will find the same things and snap them from the same points of view.

Nature-studies call for an imaginative, personal feeling, for a close regard for line and mass and for appreciation of design as a whole. Especially is the last-named qualification important, because many nature-studies are pleasing chiefly because of the successful manner in which they fill the space.

The methods which I employ in producing my nature-studies vary considerably. Sometimes I make the pictures just as I find them in nature; again, I stage the pictures indoors, and, in case I employ living animals, I often coax them into quiescence with a few drops of chloroform. To my mind the end justifies the means, and I do not care how a picture is made, so long as the finished product bears the imprint of art and appeals to the imaginative eye.

I never administer chloroform unless I find it absolutely necessary, because I love all creatures and am as much averse to cruelty to animals as anybody. I have found, however, that if chloroform is administered carefully it will leave no bad after-effects and the animal will soon regain its normal condition. I administer just enough of the drug to put the animal to sleep, and I do this by placing the animal under a glass tumbler in which I have placed a pellet of cotton moistened with the drug.

Animals that breathe with lungs require very

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little chloroform. Half a dozen inhalations are usually sufficient to put the animal to sleep, and the moment that this has been accomplished I take the creature out and pose it. The camera has previously been set up and all the accessories gotten in readiness and, just as the animal opens its eyes, I make the exposure. Frogs will sit very still and gaze fixedly for thirty or forty seconds after they wake up.

Animals that breathe by means of spiracles require much more chloroform to put them to sleep. Half a minute to five minutes may be required to put an insect in a state of somnolence. I have even seen insects that would not go to sleep after a full hour's administration of chloroform. Why this should be, I am unable to state. That is a problem for the entomologist.

I do not want to give the impression that I favor the use of chloroform in order to make photographic nature-studies. Whenever possible, the picture should be made without resorting to such stringent methods, and it is amazing how often tiny animals can be photographed successfully in the ordinary manner. Take frogs for example. The picture of the frog facing the toad was made without the use of any anæsthetic. The two animals were brought into the house and coaxed to sit on a bit of moss close to a window. It was by no means an easy matter to get both of them to sit still at the same time and without winking their eyes; but after I had made them face each other for the twentieth time, they came to the conclusion that it was useless to resist and that they might as well obey the photographer. So well did they behave, that I was able to give the plate an exposure of thirty seconds. Also the fat little toad sitting all by itself deep in thought was photographed without any drug. I watched it for several weeks and many a time would it sit immovable for two or three minutes. Only when an inquisitive fly came too near was there a sudden lightning-like movement of the head and then a contented munching of something soft and juicy. The picture of the frog on the toadstool was obtained with the aid of chloroform. Just a few inhalations were necessary to cause the frog to sit still for over half a minute. The toadstool was thrust into a tuft of moss, the whole placed on a chair close to a window and then the toad was carefully placed on the toadstool and the exposure made.

THE FLY-HUNTER — LEHMAN WENDELL

Tree-toads are not difficult to photograph, especially out of doors, because they are rather sluggish creatures and would much rather wait for flies to come to them than to jump after them.

THE MONARCH BUTTERFLY
LEHMAN WENDELL

RIGHT AT HOME
LEHMAN WENDELL

The pictures of the tree-toad on the pencil were secured out in the yard on a cloudy day. An exposure of one-fifth of a second was found ample. The pencil was first set up rigidly and the proper focus obtained, then the toad was placed on the pencil with the certainty that it would be in focus. It would cling to the pencil wherever placed. The background is a flower-bed completely out of focus, and it is just dark enough to set off the toad to best advantage.

The picture of the Monarch butterfly on the thistle was made without the use of any chloroform, but Mother Nature herself was kind enough to lull the butterfly to sleep. It was a cold, foggy, disagreeable day, and the butterfly and thistle were brought into the house. Then the thistle was placed firmly in a vase, a white cardboard behind the vase and then the butterfly was carefully placed on the thistle. An exposure of two seconds was given on a fast plate with the full opening of the diaphragm.

Young birds are perhaps the least difficult of all animals to photograph. They seem to have no sense of fear, whatever, and they will usually remain perched where placed. The fuzzy little fellow pictured in these pages had fallen out of its nest, and the mother scolded him so unmercifully that he seemed delighted when the photographer came along and suggested that he have his picture made. In order that his downy little body might show most advantageously, an open doorway was chosen as a background, and the gloom of the interior seemed to give him just the right setting. He was an extremely patient and willing subject, and intensely interested in all the doings of the photographer.

"LOOK THIS WAY, PLEASE!" LEHMAN WENDELL

The shutter seemed to interest him the most, and he gazed at it and blinked his little eyes and craned his neck to see how it worked. And, yet, he behaved very nicely. I found that a profile was most becoming to him, because a front-view showed nothing but an enormous expanse of mouth and, I am sure, that the mother herself was not wholly pleased with it. When I was ready to make the exposure, I held out my hand to the left and said, "Look this way, please!" Immediately the fledgling turned his head that way and gazed fixedly while I studied the expression and made the exposure. He obeyed the same command for three other exposures. Such

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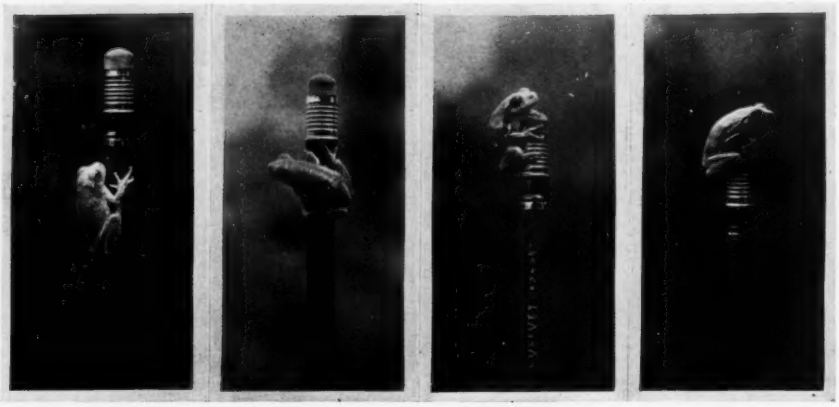

FRESHMAN SOPHOMORE JUNIOR SENIOR

LEHMAN WENDELL

intelligence must have gladdened the heart of the mother!

No special equipment is necessary for nature-study photography, except that the camera must have a long bellows-extension. This is necessary because we often work within a foot or two of the object, and close-up work, as is well known, requires a long draw of the bellows. Personally, I prefer a small camera, though this is immaterial. The individual worker must determine the best size from his own experience. My own camera is of the pocket-size for pictures 2½ x 3½ inches, and my prints are therefore all enlargements. There is one great advantage in this—I can enlarge whatever portion of a negative I desire and yet produce prints of a uniform size.

Vessels as Pictorial Subjects

WILLIAM S. DAVIS

ALTHOUGH marine-photography in some form is fascinating at all seasons of the year to those who have access to the material, many readers find their only opportunity during vacation-days on the coast. The conditions are so different from those found inland that some suggestions may help to avoid the disappointments caused by lack of knowledge in dealing with unfamiliar material.

There are a number of classes into which seaside-material can be grouped, such as surf-views, waterfront-scenes and shipping. I propose to limit myself to the last-named branch, as I have discussed the others at greater length in articles published in PHOTO-ERA several years ago. However, this one branch of marine-photography is broad enough to be worthy of the best skill at one's command; particularly if justice is done to the varied pictorial impressions received. With the possible exception of a living subject, there is none that displays a greater variety of line through changes in viewpoint than vessels—especially those under sail—and, add to this the countless transformations taking place in their natural surroundings of sea and sky—what better material does one need to produce pictures?

With regard to the equipment, one must remember that much of the work will be done necessarily afloat, therefore, when but one camera is taken along, it should be easily operated in the hand; and, of choice, simple enough not to be affected readily by moisture and rough handling. Were it not that ordinary box-cameras are generally fitted with lenses of short-focus and inferior quality with regard to their ability to give a sharp image to the corners of the picture at full opening, such cameras would be well suited to

our purpose on account of their simplicity and strength. However, as matters stand the most practical outfit for serious work is a folding-camera that makes pictures not larger than 4 x 5 inches, and is fitted, preferably, with a lens whose length of focus is not less than one-and-a-half times the longer way of the picture. Even a single achromatic lens will give very good definition up to a working aperture of F/11 when not expected to cover more than a narrow angle; but a good rapid rectilinear, or an anastigmat lens, gives sharp definition at larger apertures, and this is of value when one wishes to use a ray-filter in snapshot-work. If such lenses are of the convertible type, a single element can be used alone when an especially long-focus lens is wanted for distant objects—provided that the camera has sufficient bellows-extension. When photographing from the shore, I have used a view-camera on a tripod, employing the rear half of a rapid rectilinear to obtain a larger image of some distant craft; but most of my pictures made on the water have been made with a 3¼ x 4¼ folding-camera that uses plates and is equipped with a good lens and shutter. Sometimes, of late, I have used a 2¼ x 3¼ pocket film-camera. The only objection to the latter type of camera for work of this character is that the part of the original negative which contains all the material desired for the finished picture is sometimes so small as to require extreme enlargement; and, when the latter is overdone, either the quality of definition may be unsatisfactory or the granular structure of the film may become obtrusive. When the greater part of a negative can be used, there is no difficulty to obtain good enlargements up to 8 x 10 inches, and often larger.

If we omit from consideration *close-up views* of racing motor-boats and hydroplanes, any well-made shutter possessing rated speeds up to 1/100 of a second is fast enough for marine-photography. At least, I have never found it necessary to use a higher speed to prevent blurring.

A good-sized direct-vision finder is a great help, as it enables one to watch the movement of the subject rather than the image which, in the ordinary reflecting-finder, moves the opposite way to that of the subject. The best type for the marine-photographer is a simple open-frame with a sight-hole placed far enough behind to show just the amount of view included when the eye is applied to the aperture. It is well to have the reflecting-finder also for use when an extremely low viewpoint is desirable.

With the exception of some studies made from shore, it is usually necessary to set the lens without focusing visually; but as the subject-matter is generally far enough away to set the lens at the one-hundred-foot mark on the scale—which for all practical purposes can be taken as infinity when focusing—no trouble should be experienced to obtain sharp definition if one makes sure that the scale is accurate. It is well to test the latter unless experience has proved it correct. Since light is reflected from all directions to a greater extent than is the case with other subjects, the chances of fogging the image is increased unless care is taken to prevent extraneous light outside the angle of view from striking the front surface of the lens; therefore, "safety first" calls for the employment of a lens-hood or shade. The form is immaterial so long as it goes entirely around the lens and is stiff enough not to collapse in the wind.

Of course, care should be taken in manipulating the slides of plateholders, or in changing a roll of films, to prevent light reaching the sensitive surface. If a shady spot cannot be found, a focusing-cloth should be used. Never let plateholders lie in the sun for even a few moments. Intense light is likely to penetrate hard-rubber slides, and a hot sun will warp plateholders enough to make them troublesome to manipulate.

No outfit is too small for a ray-filter to be included, if there is any means to attach one properly to the lens when wanted. A light, yellow tint, which only calls for three-to-four-times increase in the exposure, is deep enough to give good color-correction in marine-photography; and, even though it is not always possible to allow this additional time, it can be done much oftener than in hand-camera work ashore, owing to the intensity of illumination and more luminous shadows. Besides, it is usually necessary to stop-down the lens to control the light when a filter is not used, consequently by employing a sufficiently large opening with one in place the same shutter-speed may still be used. On gray or foggy days there is little, if any, advantage to be gained by employing a ray-filter; its greatest value is evident when a vessel in shadow appears against a delicate sky with light clouds; or, to preserve relative values between white sails in sunshine and blue sky, and tones of light in calm water.

In my opinion an orthochromatic emulsion, even without the aid of a ray-filter, gives better quality than an ordinary plate, and good results can be had with single-coated grades; but it is better, especially for a beginner, to select a "non-halation" make, since the greater latitude it possesses in the matter of exposure enables him to control extremes of contrast more easily. Films possess very good latitude; and the extreme sensitiveness of those in the speed-class permit the

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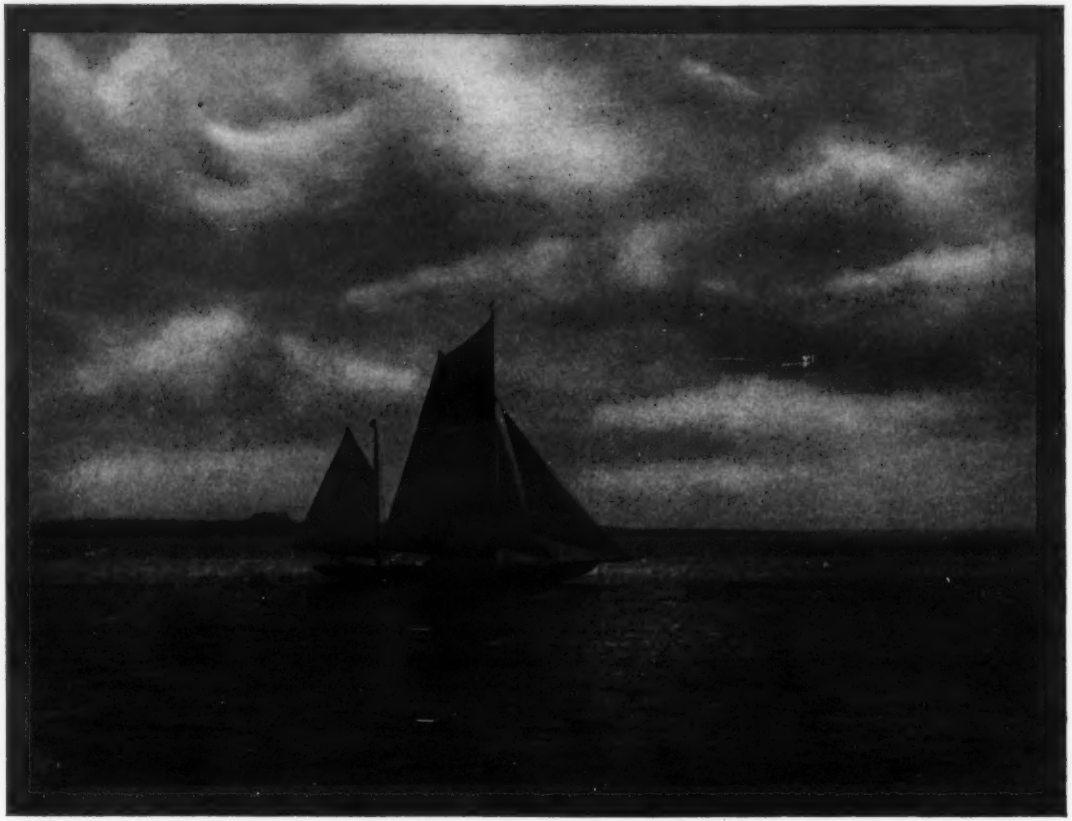
frequent use of a filter with lenses of only moderate aperture without necessitating slowing down the shutter too much.

Often, a comparatively slow exposure can be given safely when one is standing upon shore, or on a wharf, as vessels some distance off do not move rapidly across the field of the lens; and if they are at anchor, or are moving directly toward or away from the observer, the movement is very slight indeed. Although it is best to give a bit faster exposure than is absolutely necessary to be on the safe side—most subjects made in this way may be snapped with exposures of from 1/10 to 1/25 second, according to the distance and direction of movement. Making exposures from a vessel is entirely another matter; for, in addition to the factors already named, one has to consider the relation of the changing viewpoint—whether the craft one is on is moving in the same, or opposite, direction as the subject; whether one or the other is at anchor; the natural rise and fall from the action of the waves upon the boat from which the picture is made; and, on a steamer, the vibration of the engines, which imparts sufficient movement to blur the image if the shutter-speed is not fast enough to overcome it. Either the 1/50 or 1/100 second marked speeds of a good shutter will serve the purpose; the slower ones will answer when the vessel one is on is moving with the subject, or is passing a vessel at anchor; but 1/100 is safer if the subject is going in the opposite direction. There is a knack in holding the camera under such conditions. A skilful operator can do considerable to lessen the danger of blurring the image—after locating the subject in the finder—by steadily swinging the instrument to conform with the apparent movement of the subject and by keeping it as nearly as possible in one position in the field of the lens when the exposure is made.

The lighting of distant vessels is naturally more uniform than when they are seen near wharves, as there is nothing outside the subject to obstruct the action of reflected light from the water; and, as the latter renders the shadows more luminous than is possible in a landscape, the likelihood to obtain hard black shadows from underexposure is reduced. However, such a possibility should not be overlooked, particularly in waterfront-studies. On a clear summer day, when the sun is four hours high, the shutter can be set for 1/100 second, and stop F/16 used with most plates. If one is using film like the Ansco "Speedex," the next smaller stop might be used with the sun upon the subject. This is only intended to apply when a subject is not near enough to occupy more than about one-third of the width of the picture, the remainder being sea and sky, and no ray-filter is used. If a filter is used, open up the lens to F/8, or slow down the shutter.

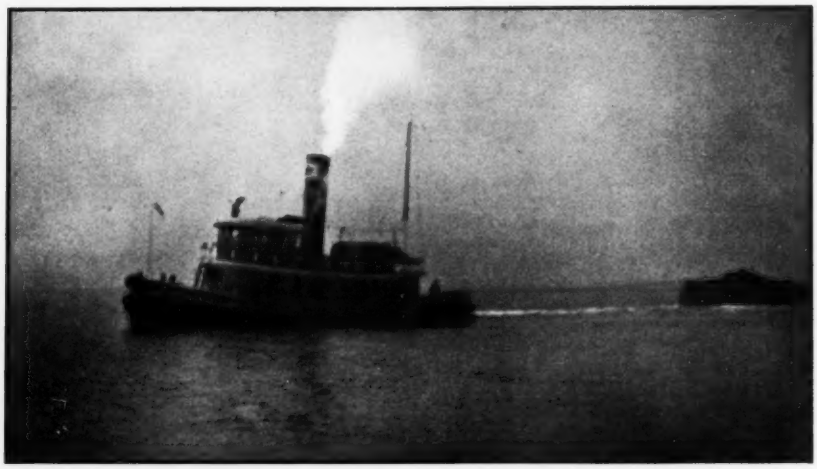
When most of the picture-space is filled, or small craft are seen at close range as a foreground-feature near shore or in wharf-scenes, changes in lighting exercise far more influence upon the illumination; and, consequently, the exposure required. A large opaque body, such as the hull of a steamship, seen against the sun reflects only a fraction of the light to the lens that it would if the sun were upon the object. The difference is so great that a white vessel in shadow may require more exposure than a black one in full light. The effect of sunshine upon a clean, white sail is positively dazzling at close range, and it might give rise to halation if due allowance was not made in timing the exposure; or, what is better, taking the precaution to use non-halation plates, and a ray-filter as well. In a case of this kind, the exposure might be less if the subject were at some distance; but, ordinarily, more exposure is required for nearby shipping, as the depth of the shadows is not materially reduced by the intervening atmosphere—as happens when the subject-material is well removed from the lens. One must be guided a good deal by the degree of contrast present, for to obtain agreeable tonality throughout, the exposure must be long enough to penetrate the shadows. With the sun to one side—but upon the subject—considerable light is reflected into the shadows from the surface of the water; but in against-the-light studies, not only is the direct sunlight cut off from the surfaces presented toward the lens, but the reflected light reaching the shadows is correspondingly reduced. The difference is such that one is safe in allowing from two to four times as much exposure as would be required with the light upon the subject; and, when the shadows are made still deeper by a pier or buildings shutting off a part of the light, even more time may be necessary.

The basis for the exposures suggested is for 9 A.M. or 3 P.M. (normal rather than "daylight-saving" time) in midsummer and clear light. Doubtless, some may wish to know what allowance to make for the light at other hours. On fair days an hour earlier or later will not make much difference in the open,—the latitude of the sensitive emulsion is sufficient to take care of this; but when the sun is only an hour high one will be safe to give four times the exposure and a proportionate increase between times. The presence of yellow haze near sunset reduces still more the actinic power of the light, and although an orthochromatic emulsion is much more sensitive to yellow than an ordinary one, it will not be



YACHTING-WEATHER

WILLIAM S. DAVIS



THE TOWBOAT WILLIAM S. DAVIS

affected by this to the same extent. When dealing with a mass of shipping around a wharf, more exposure—proportionate to the general strength of the light—may have to be given, for the lower angle of lighting produces a greater proportion of shadow in such subjects. For this reason, the height of the sun above the horizon is often a more important factor in determining exposure than its actinometric strength. On a gray cloudy day allow double the time given in fair weather. Light, detached, clouds make little or no difference in the exposure needed.

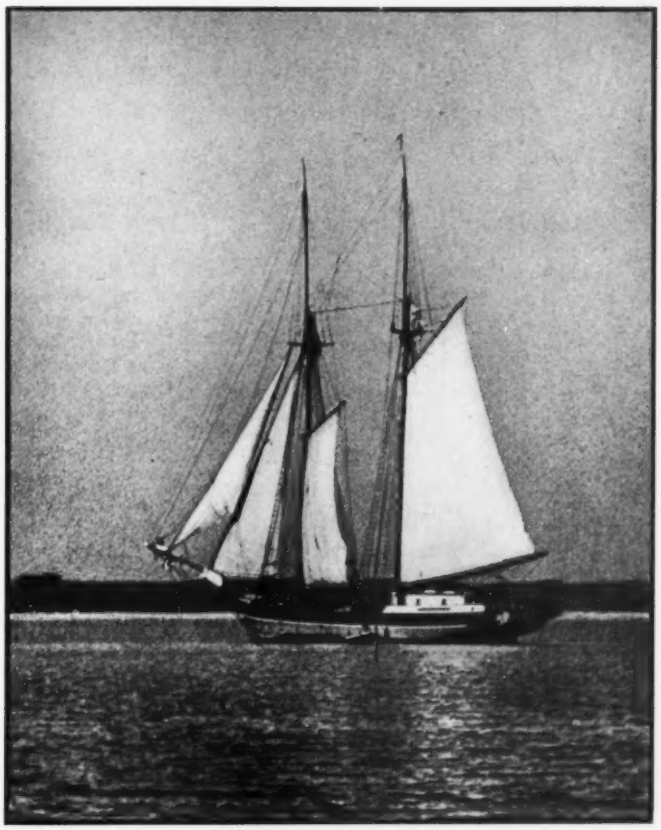
I have gone rather minutely into the purely technical side for the reader who lacks practical experience rather than artistic ability to deal with the subject; but a few hints as to pictorial treatment of the material might not be out of place.

When a single vessel provides the motive, look well to its placement in the composition. In the hurry and excitement sometimes attached to making an exposure, one may not be able to give very careful attention to this point while looking after the important matter of releasing the shutter when the subject is seen at its best. However, if sufficient space is allowed, fearless trimming and enlarging of what remains will make the final spacing satisfactory. If the whole of a vessel is shown, allow most space ahead of it, as one headed out of the picture conveys the impression that it will shortly fetch up against the margin "with a round turn." Unless one wishes to suggest a high standpoint or make a study of reflections close at hand, the horizon-line had best be kept below the center; and, although it should not be necessary to mention the matter, it really belongs in a horizontal position, though sometimes otherwise represented!

A low viewpoint—say from the lower deck of a steamer—is better than an elevated one, particularly when the subject is coming toward the spectator, for it prevents an impression that the craft is plunging downhill, and it brings out the vessel's lines in a more pleasing manner.

Action in a sailing-vessel of any rig is most effectively expressed by a quartering view, as that shows clearly the effect of wind upon the sails and the heeling over under the propelling force. Suitable clouds likewise help the impression of motion. A side-view sometimes gives an agreeable decorative effect, with the sails and spars silhouetted against the sky. Large steamers produce an impressive sense of size when seen nearly bow-on from a fairly low viewpoint; a trail of smoke or steam helps the general pictorial effect by removing a certain hardness in the mass of the ship alone. Sometimes, a pleasing panel can be made of a fleet of yachts, or a tug and tow.

The end of a pier at a seaport or the bank of a commercially important river usually offers the best stationary standpoint from which to photograph passing shipping, or anchored craft. A long-focus lens comes in handily in such circumstances; but greater variety of material is usually met with in less time when photographing from a vessel. If not fortunate enough to be able to direct the movements of a private yacht or launch, many good subjects can be snapped when traveling upon regular lines of steamers and ex-



GETTING UNDER WAY — WILLIAM S. DAVIS

cursion-boats. Even the ferries afford a cheap means to cover a harbor or river if one makes a number of trips on different boats. When the vessel follows a regular route, one cannot, of course, go after a subject that takes the fancy; but, even at that, there is enough material which does come within range to make such a trip worth while. "The Towboat" is an example; it was made from the gangway of a Long Island Sound steamer going in to New York one morning at a later hour than usual owing to a heavy fog making it necessary to run slow. The fog accounts for the nearby shore of the East River being invisible in the picture. "Yachting-Weather" was obtained from another steamer while on an excursion upon the Sound. "Getting Under Way" is a specimen of work from shore, although not made with a long-focus lens. The subject being some distance off, the regular lens gave a small image; but as care was taken to get it very sharp the section of negative wanted for the finished picture stood a high degree of enlargement in a satisfactory manner.

It is by no means always desirable to show all of a vessel in a marine study, as a part sometimes concentrates the interest better upon certain details, or lends more variety to the pattern of the composition. Reflections add much to the charm of a quiet marine, whether from some ship drifting with the tide, or a sail-boat at a landing. Of necessity much has been left unsaid; but I trust that the foregoing suggestions will prove helpful to others interested in marine-photography; and after all, much of the pleasure derived from it lies in working out for one's self what has only been lightly touched upon in this article.

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Practical and Humorous Experiences in Photography

Part VII. The Advanced Worker

A. H. BEARDSLEY

IN recent years a body of amateur photographers has arisen which prefers to be known as Advanced Workers. Some of these are virtually professionals; but they object to be called professionals as strongly as they dislike to be called amateurs. Among them we find many of the so-called pictorial photographers who revel in pictures of the "fuzzy" kind that often appear equally well upside down. They make much of tonal values, light and shade, atmosphere and fidelity to a Nature the rest of us have never seen. That their work has merit, I do not deny; but I do feel that it requires unusual artistic feeling to appreciate and understand it. Frankly, I never could enjoy impressionistic pictures—that is, the extreme sort so loudly praised by some artists. Many of these advanced workers produce pictures that even a hardened impressionist might be unable to appreciate. Soft-focus lenses to produce "atmosphere" are now manufactured by several optical firms and these add immeasurably to the happiness of the pictorialist.

Just why a fluffy bow-tie, long hair and untidy clothes make a man a better photographer, artist or writer, is a question that still remains to be answered to my satisfaction. Some persons—retired from active business-life—take up amateur and also professional photography. As business-men they dress neatly and becomingly, but as devotees of photography, art and literature they appear absurdly uncouth and unattractive. Why? From time immemorial, any occupation of an artistic or literary nature seems to demand automatically the relinquishment of normal conditions of life and dress. Often, the more freakish a man looks and acts, the greater photographer, artist or writer he appears to be—in his own estimation, if in no one else's. A statement of fact is not always an explanation; hence, who first started the idea?

No doubt, advanced workers strive to reach an ideal; but in many cases the ideal in question appears to be a veritable will-o'-the-wisp. Our photographic exhibitions contain striking examples of what is being done by certain pictorialists in landscape, genre and protrait-work. The question is, how much of it is appreciated by the man on the street. It has always seemed to me that the highest expression of true art was the simplest. A picture that appeals to the few and is unintelligible to the many, is a sort of local affair. If it gives pleasure to those most vitally interested, well and good; but why try to force it on those who cannot or will not appreciate it?

It is not my intention to belittle or to cast reflections on advanced workers. Most of them are sincere and deeply interested in their work. They, as a class, are fully as interesting to study as amateur photographers and much of value may be learned from their activities. However, at the present time they are in the minority and, being in that position, are scarcely entitled to assume that their work is representative of American photographic art as a whole. I believe that a landscape may be made with all the necessary "atmosphere" and still resemble the original subject as we know it. The advanced worker sometimes leads us to think that the human eye sees nothing truly sharp. This may be true with regard to a distant landscape on a summer afternoon; but what of nearer objects? A basket of apples does not have a hazy softness about it as I look at it. In fact, all the beautiful markings on the apples are extremely sharp and the basket itself is far from being "diffused." I may be all wrong and showing myself to be utterly ignorant of the rudiments of art. If so, I admit my ignorance and beg a thousand pardons. However, I know how things look to me; and, since I cannot see through eyes other than my own, I am obliged to base my conclusions on my own sense of sight. To my way of thinking, any picture that must be explained or that is obliged to lean upon a title for identification is not a true picture, but an effect. Of course, effects may be artistic, beautiful and inspiring; but that does not make them pictures.

Although I may appear to belittle the work of some of the advanced workers and to be inclined to question their personal appearance on certain occasions, there is no malice in my criticism. I realize that, for all I know, these same advanced workers may be pioneers in a field of artistic expression beyond my ability or training to appreciate. Because a thing is new and not espoused by the crowd, it does not follow that it is wrong or that it should be subjected to ridicule. There is one thing of which we can be sure, and that is that true merit wins a place in the sun despite every obstacle. If the advanced workers are on the right track, criticism of whatever

HER PET — ALEXANDER MURRAY
HONORABLE MENTION — DOMESTIC PETS

nature will but spur them on to greater efforts, and those of us who feel that we must see to believe, will be shown conclusively that "we have eyes but see not." Often, a well of pure water is the better for having been roiled. If modern photographic art is even now in the process of being roiled to remove the sediment of narrow-mindedness, ignorance and jealousy by all means let the advanced workers continue to keep things stirred up—the result will be better and truer artistic expression.

In conclusion, let beginners, amateur photographers and advanced workers strive to make photography more than a mere pastime. No avocation in the world holds out greater mental and artistic rewards than photography. It is a science, and all science is wonderful, beautiful and spiritual. Moreover, to-day photography has become the one method to record visually the personal and national events of the world. Every picture made—no matter how unimportant to the present generation—may become invaluable to posterity. Many a snapshot made in jest becomes all that we have to remind us of a loved one; and every picture made should represent the camerist's best effort. Let us make our work in photography teach us the deeper and truer things of life. Let our trips afield with the camera bring to us that love of nature and humanity that enriches the heart with love and understanding. No true man or woman considers it a sign of weakness to aim for the higher things in life. In the years to come, as we sit in the firelight with our pictures before us and events of the past come stealing back to our minds, let us be able to close our eyes with the sweet consciousness that photography has made a record of which we can be proud. Sentimental? Yes, but honor to the man or woman who makes photography a stepping-stone to an understanding of the Infinite.

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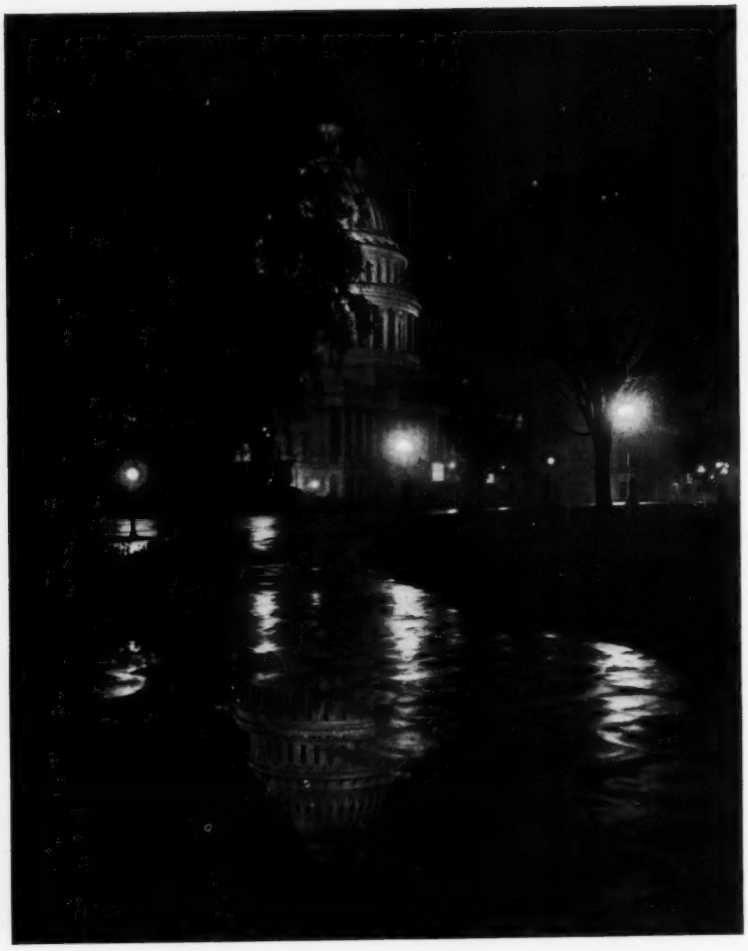

NIGHT-REFLECTIONS
WARREN R. LAITY
HONORABLE MENTION — MISCELLANEOUS

EDITORIAL

Outdoor-Backgrounds

A TOPIC that seems to be regarded with complacency by critics of photographs of outdoor-genres, or figures in landscape, is a distorted and ill-defined background. Pictures of this character have been hung at photographic salons; but in serious prize-competitions that are intelligently and honestly conducted they would scarcely be deemed worthy of recognition. In the former case, striking originality or compelling beauty of the subject is regarded by the committee of selection as greatly outweighing such minor defects as a slanting water-line, an incongruous accessory or a spotty background. In the latter case, of two pictures of nearly equal merit under consideration for a prize, the one with a grossly neglected background is rejected. And why? Because the artist concentrated his attention upon the main subject and gave little or no thought to the background. Carried away by the enthusiasm of the moment, he poses his charming model with some trees or bushes in the immediate background through which the light is filtering. The lens is focused upon the chief point of interest—the figure—without regard to the immediate surroundings. The large stop that is used in making the exposure—generally F/6.8 or F/4.5—leaves matters as they are; *i.e.*, a picture with a wildly confused background. The result is that every object is out of drawing, distorted and beyond recognition. Innumerable, well-defined round spots, known as circles of confusion, dot the landscape, like freckles on a boy's face. (An admirable paper devoted to an analysis of these circles of confusion appeared in PHOTO-ERA, November, 1916.) Objects, such as tree-trunks, bushes, plants, and rocks, assume fantastic shapes and add to the confused and bewildering appearance of the scene. It may be that, conscious of the prominence of these objects, the photographer desired to subdue or disguise them.

It would be much better if he had divided his focus and allowed the objects in the background to assert themselves sufficiently to be, at least, distinguishable. To have thus increased the penetrating power of his lens—augmenting the number of focal planes—would require the use of a smaller diaphragm and, consequently, an increase of exposure; but under favorable conditions of light, a change from one-hundredth to one twenty-fifth of a second, for example, would not prove detrimental to ultimate success. Of course, if the quicker exposure with the attending sacrifice of background and accessories is preferred by the photographer, he has the choice of three things. One is to mask out part or all of the pictorial setting and then by double printing replace it by an harmonious and more pleasing one. This calls for fine judgment, unerring technical skill and practical experience. Or he can choose, at the outset, a suitable setting for his theme, and, like the painstaking artist, he plans his picture in advance, with an eye to the beauty and harmony of the composition. With a pleasing background, he so adjusts his focus as to unite the figure and the setting into an artistically blended ensemble. If trees or bushes form the background and are at considerable distance from the figure or group, the photographer should have no trouble to make them appear as a soft, smooth, atmospheric effect. Yet, after all, such a compromise is not so satisfactory as an agreeably defined and consistently graduated bit of natural scenery, which forms an ideal setting.

It often happens, however, that, lacking a suitable pictorial background, the artist will decide in favor of one that is quite dark, such as the interior of a barn or a shed, where the figure is posed on or near the threshold. Even here, the photographer must take care that the camera does not record objects that, at first glance, had passed unnoticed. Accustomed to the obscurity of the interior, the eye will gradually detect one object after another. In order to avoid them, the experienced photographer may take advantage of a decreased length of exposure; for here is nothing beyond his model that should be included in the picture. Therefore, he may use a large stop, if not the full aperture of his lens. Should the shafts of a vehicle, some farming-implement or some other intruding object assert itself in the negative, but little skill is required to subdue or to remove it, for the section of the negative to be manipulated is virtually clear glass. These remarks are intended mainly for the benefit of camerists who use equipments of postcard-size and larger. On the other hand, small-sized cameras—the vest-pocket kind, in particular—are fitted with lenses of much greater depth of focus, and can make those difficult scenic backgrounds behave themselves.

XUM

ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. As many prints as desired, may be entered, ***but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind—or with thin wood-veneer.* Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Spirit of Spring Competition
Closed June 30, 1919

First Prize: J. Herbert Saunders.
Second Prize: John Dove.
Third Prize: Leopold Zwarg.

Honorable Mention: Ethel Dismukes, Geo. W. French, Ormison O. Hilborn, Norman C. Hussey, B. F. Langland, W. S. Lee, Rev. Leon M. Linden, Stephen Marsh, Lucy and Ray Mathewson, Alexander Murray, George S. Nalle, Kenneth Dudley Smith, Edward Terribile.

Subjects for Competition—1919

"Speed-Pictures." Closes June 30.
"Rural Scenes." Closes July 31.
"Shore-Scenes." Closes August 31.
"Outdoor-Genres." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.

1920

"Twilight-Pictures." Closes January 31.
"Still-Life." Closes February 28.
"Nature-Studies." Closes March 31.
"Rainy-Day Pictures." Closes April 30.
"Miscellaneous." Closes May 31.

Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize ($10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Non-Receipt of Photo-Era.

IT should be unnecessary to remind subscribers of PHOTO-ERA that its Publisher is doing his very best to overcome conditions brought on by the war. Nevertheless, there are some who have held us to task for the non-receipt of PHOTO-ERA. Subscribers who fail to receive their copies—*after liberal allowance for mail-congestion*—should write us and we will see to it that a duplicate copy is mailed.

FIRST PRIZE
SPIRIT OF SPRING

"WHEN MAY GLIDES ONWARD INTO JUNE" J. H. SAUNDERS

Buying Second-Hand Apparatus

PROBABLY the purchase and sale of second-hand apparatus has never been upon so large a scale within the memory of photographers as it has been of late, and it is likely to be so for some time to come until the normal output of manufacturers is restored. Hence a few notes, which appeared in a recent issue of *The British Journal*, on the purchase of apparatus may not be out of place. A prospective buyer had two courses open to him to supply his needs. According to the first, he may watch the advertisements of goods which are offered, or himself insert an advertisement of what he requires, or, according to the second, he may state his requirements to the dealers in second-hand requisites. There is something to be said for both methods. In dealing with strangers it should be an invariable rule not to send money; but to insist that the transaction should pass through the deposit-system of the paper in which the advertisement appears. Certainly, something may be gathered from the style of an advertiser's letterhead or writing; but it does not need much knowledge of human nature to know that a favorable impression in either of these respects may be created by a rogue. There is, moreover, the trouble to get goods on approval and to come to an agreement with the advertiser as to the payment of carriage in the event of their not being purchased. On the other hand, the price asked by a private advertiser is very often less than that required by a dealer, and the would-be seller, if he can find a reliable purchaser, would rather dispose of his goods in this way than to a dealer, on account of the better price which he gets. There is nothing contradictory in these two statements, for a dealer's price when purchasing is usually one which provides a very ample margin against the contingency of the money represented by the goods lying idle for a long period until a re-sale is effected.

The advantages that the dealer offers are many. Having a large stock, he can nearly always supply a camera or lens of almost any required pattern from stock. In most cases, a guarantee is given that it is in good condition. The apparatus may be had on approval and tested to the user's complete satisfaction without the fear that might reasonably be entertained about

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HARBINGERS OF SPRING — JOHN DOVE

SECOND PRIZE — SPIRIT OF SPRING

an unknown stranger that sharp practice or reluctance to release any deposit may cause a lot of trouble before the affair is finally settled.

Before taking the various classes of apparatus in detail a word may be said about the price. At the present time, owing to the almost total absence of new goods from the market, second-hand apparatus is fetching a high price. In some cases, recently, cameras and lenses have been fetching more on the second-hand market than they did a few years ago when brand-new. We think many photographers lose sight of a very important point when buying apparatus, and that is how the particular goods appear in the light of an investment; how they will re-sell in the event of their owner having no further use for them. In this the old axiom is true: that the best is always the cheapest. At the present time, old or out-of-date apparatus may be bought for five or ten dollars. What will be its value a year or two hence?—possibly only a dollar or two. Then, those whose habit it is to compare prices will often find that one particular pattern of camera and lens—or lens alone, for that matter—may be quoted at a certain price. Another of the identical type may be quoted by the same or another firm for perhaps twenty-five per cent less. It must not be inferred that the one is a bargain and the other excessively dear, because the reverse may actually be the true order of things. In fact, the price asked by a reliable firm may be taken as a criterion of the quality of the goods. If two models are priced as described above by competing firms it may be assumed that there is something about the one instrument that makes it worth more than the other. The camera or lens may be of more modern pattern; or, if this is not stated, it is almost certain to be in the better condition. We have seen apparatus on the market that—knowing the trouble that will arise from its use or the cost of its repair, even assuming that such is possible—we should consider dear at any price, and in this way the reputation of an established dealer becomes of real value to the prospective purchaser.

Coming now to the defects to be looked for in apparatus of various descriptions, field- or studio-cameras require to be examined for warped, split, or scratched woodwork, worn, bent, or loose-fitting struts. The bellows should be carefully looked at; what is described as leather may actually be imitation leather or cloth. The camera should be racked out to its fullest extent in a darkroom and an electric lamp placed inside it in order to test the light-proofness of the bellows. The latter, if old or worn, will be found to be loose and to sag, and it is then certain to give a good deal of trouble in the way of cut-off. Rigidity of the back and of the front of the camera when erected are specially important points, and the intending purchaser will hardly neglect to examine the focusing-mechanism for smoothness of movement. A camera which has had a good deal of wear, or has been roughly used, will allow the focusing-heads to be turned through an appreciable angle without any corresponding movement of the front or back, as the case may be. This "backlash" makes accurate focusing by no means a matter of certainty. In the case of folding focal-plane cameras, a feature of prime importance is rigidity of the strut-system by which the front is held extended. If this is defective a satisfactory repair may cost quite as much as will discount any benefit from the purchase. In testing the shutter of such cameras the intending purchaser should not omit to try it at the lowest speed. A shutter which may work satisfactorily at the maximum spring-tension may prove erratic at the lower speed as a result of weakening of the springs. Here again, it requires to be borne in mind that the repair of a focal-plane shutter is usually somewhat expensive.

In case of book-form plateholder attention should be

THIRD PRIZE
SPIRIT OF SPRING

A PERFECT DAY IN SPRING LEOPOLD ZWARG

given to detect warping. In one case we knew a double mahogany book-form plateholder had warped to such an extent that it could not be inserted in its grooves in the back of the camera. The plateholder should be held quite close and firmly by its catches, thus preventing the admission of light. Any shrinkage of the woodwork will cause the springs or catches to hold loosely. If the two halves of the plateholder may be moved with the catches in position shrinkage of the wood has taken place, and it should be regarded with suspicion. The slides should work smoothly in the grooves. In the case of metal plateholders the slides should be examined with a view to detect dents or abrasions, which, owing to the very light clearance, may scrape the surface of the plate when being drawn out. Vulcanite slides should be examined for pinholes, which have been known to appear after a course of ill-usage.

The Sky-Shade

It is amazing to see the difference in the appearance of the negatives when a sky-shade has been fitted to the lens, says *The Amateur Photographer*. The photographer who has any suspicion that his plates or films are foggier than they should be, will do well to see whether an immediate improvement is not effected by slipping on the hood or barrel of the lens a little tube of cardboard, carefully painted a dead black on its inside. With the lenses fitted on most hand-cameras, the hood may project from a half to three-quarters of an inch in front of the glass without cutting off any of the image; and a single trial on some general view will show whether the hood requires any shortening to allow the image to reach the corners of the plate. Provided none of the active light is cut off from these corners, the longer the hood the better. A word of caution may be necessary with reference to the rising- or sliding-front; as when either of these is used, a hood which is efficient with the lens central may cut off some of the picture; but, even if the hood is made short enough to enable both these movements to be used to their full extent without any cutting off, it is probable that it will be advantageous. Most high-class lenses include so wide an angle of light that the bellows of the camera, as well as the sensitive film, is strongly illuminated; and the hood serves to cut down some of this illumination and so lessens the scattered light in the camera, and helps us to get cleaner, brighter negatives.

XUM

SUBJECT FOR NEXT COMPETITION

ADVANCED WORKERS

CALIFORNIA STATE CAPITOL — E. M. PRATT

Advanced Competition—Architectural Subjects

Closes October 31, 1919

AFTER the camerist has photographed many subjects in which human- or animal-life predominates, he turns to inanimate subjects for a welcome change. Buildings do not run away, nor do they become restive. There is much satisfaction to be able to take so long as one wishes to focus and to compose a picture. For this reason, the present competition should arouse the interest of amateur and professional photographers. However, because buildings make less active subjects, is no reason why architectural photography does not demand consummate skill. In all photography there is no subject that requires such attention to light and shade, to point of view and to treatment.

In this competition, photographs of domestic, church, commercial and government architecture are acceptable. A handsome façade of a bank-building can be made as attractive as a beautiful church by selecting the right viewpoint. The importance of shadows has been well brought out by Edward Lee Harrison in his articles, "Architectural Traditions for The Photographer," that have appeared recently in PHOTO-ERA. The illustrations which accompany these articles are not intended to be examples, but rather suggestions. William S. Davis, in his article, "Some City-Subjects," published in July, 1918, PHOTO-ERA, illustrates graphically the desirability of including but a part of a large building in a picture. By re-reading these articles, contestants will be better prepared to do themselves justice in the present competition, which is intended to awaken camerists to an appreciation of the beautiful in architecture and a desire to treat it pictorially.

Buildings in villages and towns are as promising subjects as those in the large cities. A Colonial church in a New England village may be made as picturesque as an old Spanish monastery in California. Likewise, the Woolworth Building in New York City is a constant invitation, by day and by night, to the ambitious camerist. My object in mentioning these subjects indiscriminately is to convey the idea—although briefly—that any building that possesses pronounced

architectural beauty is a fit subject for this competition. However, contestants should remember that many older types of architecture do not appeal to us to-day, although in their day they were considered to be marvels of beauty. The point to remember is to select some bit of architecture that makes a strong appeal and to photograph that in preference to another bit that is apparently lifeless and cold.

One of the most important preliminary steps in the photography of all architectural subjects is a thorough study of every possible point of view. There will always be one point from which the best result may be obtained. As soon as this has been determined, a careful study of light and shade should be made. After many unsuccessful attempts "to get things just right," the camerist may find that by night his subject becomes alive with the very effect he cannot obtain by daylight. Often an artfully concealed street-lamp works wonders. In some cases, lights from within the building enable the camerist to discover the desired effect. Whenever possible, try to make the picture tell a story. Get away, if possible, from a purely commercial reproduction. Of course, some subjects are without even the semblance of a story; but there are many others that combine architectural beauty with artistic and spiritual feeling. There is an old adage that is particularly applicable to architectural photography, "Do not bite off more than you can chew." If a beautiful façade is preferable to a picture of an entire building—photograph the façade and let another camerist attempt the entire building. For example, the New York Public Library, on Fifth Avenue, is so situated that a front-view is extremely difficult to obtain because of traffic. Even from the opposite side of the avenue, the average lens will not include the entire building satisfactorily. In this case, a much better course to pursue would be to photograph the building from another point of view—down or up the avenue—and possibly the best result would be obtained by confining the picture to the main-entrance or other important part of the building. On the other hand, in Boston, the Public Library is so situated that a view of the entire building may be had from the opposite side of a large square. Moreover, pictures of various parts of the building's exterior may be made conveniently from three sides. From these remarks, camerists should appreciate the value of the advice to study their subject from every angle, and under different kinds of light, before attempting to make a picture.

Nothing in architecture is more beautiful than a high tower, either standing alone or as part of a building. At the same time, there are few more difficult subjects to photograph. Unless the camera is equipped with a rising-and-falling front, or a swing-back, it may be well to seek other subjects, for a tower that is not plumb, or one that is distorted, will be rejected at once by the judges. In some cases, a camerist may be fortunate enough to obtain the desired effect some distance from the subject by using the single combination of his lens or by using a telephoto-attachment. Always remember that the plate or film must be absolutely parallel to the upright lines of the building to be photographed, otherwise the subject will appear larger at the top or bottom or vice versa according to the direction of the camera, upward or downward. Attention to this is advisable also when photographing from a housetop or a window the use of wide-angle lenses is often necessary, although their use should be curtailed as much as possible in order to avoid distorted perspective. It is far more preferable to get far enough away to make the use of the wide-angle lens unnecessary. True enough, this is not always possible. However, it may be seen readily that architectural photography involves much technical and artistic skill; and that personal initiative is no small factor to obtain successful results.

The question of exposure is of vital importance. Experienced workers know that a white marble building requires less exposure than one made of red sandstone even though both buildings are lighted by bright sunlight. Likewise, it should be remembered that deep shadows underneath porticos and doorways require more exposure despite the fact that the sun may be shining brightly outside. The old maxim to expose for the shadows is very much in force with regard to architectural photography. In all cases, careful attention should be given to the material of which a building is constructed, particularly with regard to the color of the entrances, façades, porticos and other parts of the building that differ in color from the main building. Since colors may be photographed to a greater or lesser advantage, it may be seen that a white building with green trimmings would require different treatment from a red building with white trimmings. These little points may appear to be superfluous, but successful architectural photography takes these very details into strict account. Needless to say, a reliable exposure-meter, ray-screen, tripod and orthochromatic plates and films are essential to success. Of course, excellent photographs are made without these accessories; but the chances of success are better if the camerist is equipped properly.

In view of the fact that this is the second competition devoted to architectural subjects that has appeared in several years, it would seem that many camerists should have excellent material to submit to the consideration of the judges. The thousands of beautiful private and public buildings that are situated in various parts of the world should offer inducements enough to cause the camerist to put forth his best effort to reproduce them to advantage. The mere fact that buildings are stationary enables the photographer to work to better advantage and often with greater credit to himself. Of course, architectural photography embodies certain difficulties to be met in no other branch of photography. On the other hand, it has rewards that are worth striving for and that have a value of their own in the eyes of those who know good work.

Aside from other considerations, architectural photography is educational. By that I mean that the photographer is virtually compelled to assimilate historical or other information of value. It does not seem conceivable that a camerist would photograph a beautiful public building without inquiring a little into its history. For this reason alone the present competition may be used to great advantage by amateur and professional photographers who may wish to combine the study of history and the mastery of architectural photography. The suggestion has already been accepted by several workers very much to their pleasure and advantage.

Virtually all restrictions with regard to photographing public buildings are now removed; but, if there is any doubt on the part of the camerist, it will save time and, perhaps, money to make sure before going ahead. Usually the police can give the desired information or can refer the inquirer to the proper authorities. I am sure that many new workers are in a position to enter this competition with every chance to win a prize or Honorable Mention. We are always eager to welcome them and our old friends can often learn much that is of interest and artistic value. It is only by taking the best of the old and the best of the new that we advance successfully.

A. H. B.

XUM

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, $2.50.
Second Prize: Value, $1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Subject for each contest is ***"Miscellaneous"***; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than ***two*** years' practical camera-activity, and whose work submitted here, is ***without any practical help from friend or professional expert.*** A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from 2¼ x 3¼ to and including 3¼ x 5½ inches, and enlargements up to and including 8 x 10 inches.

4. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be tastefully mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print for what contest it is intended.***

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board—not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express.

Awards—Beginners' Competition
Closed June 30, 1919

First Prize: Chas. W. Russell.
Second Prize: Mary A. Waas.

Photographic Literature for the Beginner

WHETHER there are more beginners this year than usual, or whether the end of the war has created an unusual interest in photography, I am unable to say; but the fact remains that not in many months have we been so deluged with requests for "a good book on amateur photography." A careful reading of many of these letters reveals the fact that many of the writers do not appear to know just what they do want, although they are aware of their lack of photographic knowledge.

Some of our correspondents appear to be under the impression that there is some one book on amateur photography that will eliminate all photographic troubles at one reading. Others wish to obtain detailed information, but in a form that may be "read in a few moments." Still others seem to have the necessary leisure, but appear to dread the mental effort required to master the least technical terms and methods. However, most of the inquiring beginners are sincerely eager to obtain accurate and helpful information that will enable them to get photographic results, and they are willing to put time and money into the venture.

To those beginners who are really ambitious and eager to advance as rapidly as possible—consistent with the mastery of photographic rudiments—let me say that there is no "all-around" book on amateur photography for beginners, that mentions all lenses, cameras, shutters, accessories and chemical formulas exhaustively and in "baby-talk." Photography is a science and an art. How can one describe a chemical reaction without symbols, or a lens without optical terms? In short, even a beginner must make up his mind to master at least a few photographic terms in order that he may read intelligently and to his own advantage. The most elementary book on amateur photography includes terms and definitions that must be used in order to make the statements accurate and clear. For this reason, the beginner may as well become acquainted with the terminology, first as last.

Another point to remember after the first elementary reading is done, is to determine, if possible, what particular branch of photography makes the strongest appeal. By that I mean, if a beginner—temperamentally or otherwise—is reasonably sure that he will enjoy nature-photography better than other branches, he should endeavor to obtain the books that deal with nature-photography in detail. On the other hand, if the beginner knows that he will be more interested in marine-photography, he should seek out those books which will help him attain his ends. However, the beginner should not lose sight of the importance to read at least one elementary book on general photography: without such preparation he will be at a loss to understand the books devoted to special branches.

As already stated, the beginner should not expect that one book will be both elementary and exhaustive;

IN BOY-LAND — CHARLES W. RUSSELL

FIRST PRIZE—BEGINNERS' COMPETITION

hence, let me mention a few elementary books that are of value to the beginner as preliminary reading:

"How to Make Good Pictures," Eastman Kodak Company.

"The First Book of Photography," C. H. Claudy.

"The Romance of Modern Photography," Charles R. Gibson.

"Saturday With My Camera," Stanley C. Johnson.

"Simplified Photography" (Photo-Minature 131).

"Photography of To-day," H. Chapman Jones.

After one or more elementary books have been read thoroughly, the beginner—according to inclination—can turn to the following:

"Modern Telephotography," Capt. Owen Wheeler.

"Photography for Students of Physics and Chemistry," Louis Derr.

"Photography in Colors," George Lindsay Johnson.

"Practical Photomicrography," J. E. Barnard.

"Photography and Fine Art," Henry Turner Bailey.

"The Home-Life of Wild Birds," Francis Hobart Herrick.

"Pictorial Composition and the Critical Judgment of Pictures," Henry R. Poore.

One of our valued subscribers and friends is a well-known Boston oculist. Incidentally, he is an amateur photographer with a strong desire to make pictures that are really artistic. He appealed to us for a book that would give him the rules of composition briefly and fully. We informed him that we knew of no book such as he desired. However, we did call his attention to the nearest approach to it, viz., the department "Our Illustrations" that appears regularly each month in PHOTO-ERA. We suggested that he visit the nearest library and obtain one or more bound volumes of PHOTO-ERA, preferably beginning with 1910. We were very sure that by studying the pictures and reading their criticisms in "Our Illustrations," our friend would be greatly benefitted. The important point to remember is that not only are the pictures in every issue considered editorially but the makers supply the data to show in detail how, when and where each one was made. By reading the editorial comments and the data, the beginner will find that ere long he understands the difference between a record picture and one that embodies true principles of artistic composition.

Another practical and helpful suggestion may be found in the editorial, "A Novel Scrap-Book and Guide," that appeared in June PHOTO-ERA. Photo-equipments and the work of amateur and professional photographers is changing continually and to keep in touch with the latest and best, the beginner can do no better than read and study the illustrations in the best photographic magazines.

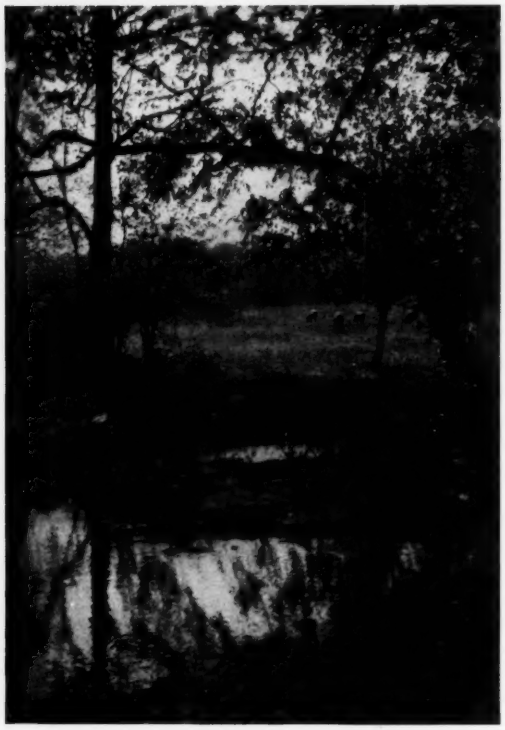
Of course, the recognized books that are authorities in the various branches of photography should be consulted frequently because they represent the ballast in the ship of photography that is needed to preserve an even artistic and technical keel.

Although there is no one book that is elementary and exhaustive on amateur photography, I believe that the alternatives suggested will help the beginner to make a start in the right direction. After all, the success or failure of any man rests with himself in great measure, and the beginner in photography is no exception.

A. H. B.

XUM

SECOND PRIZE
BEGINNERS' COMPETITION



SPRING-IDYL MARY A. WAAS

Protecting the Hands

It is very difficult to carry out photographic operations without occasionally getting some of the solutions on to the skin. In most cases no harm results from so doing. The various reagents employed are quite innocuous, if we take the ordinary precaution of a wash after working with any chemicals; but some of them affect tender skins unpleasantly, and others may leave stains which cannot be got rid of quickly.

Rubber-gloves and finger-stalls are obtainable. They are open to the objection that they are awkward things in which to do any manipulative work if they are thick; while if they are thin they are very easily damaged—the edge of a plate may cut them right through in a moment. So that, unless circumstances make some such protection absolutely necessary—which is not usually the case in ordinary photography—it is best to look elsewhere for something to keep the solutions from affecting the skin.

One of the best methods known to the writer consists of applying as a protection a very thin coating of wax. Paraffin-wax, such as is used for candles, will do very well, or beeswax may be employed. It is applied by making a solution of it in some volatile solvent such as benzole. A few drops of the solution are poured on to the fingers and quickly rubbed over. The solvent evaporates almost instantly, and leaves behind it a thin film of the wax, which should not be thick enough to be perceptible at all, but which, nevertheless, will be found to be a great protection by the way in which it fills up the pores and crevices. It is particularly useful in the neighborhood of the nails, as stains are almost always seen at their worst there. By the use of a firm wax for the purpose there is no fear of making a greasy mark on anything that is touched and the protection afforded will prove to be very effective.

After the work is done a wash with nail-brush and soap, using warm water, will remove all trace of the wax. The effect is that the skin is actually more supple and soft after the treatment than it was before. Wax is only a partial protection against the action of strongly alkaline solutions, which some people find so objectionable. In time the alkali will saponify the wax and will remove it, so that the fingers should be kept out of such liquids as much as possible.

Much can be done in the way of protecting the hands by having a basin of water handy, and rinsing the fingers therein as often as they are contaminated by the solution. If it is developer which is in use, the addition of a little metabisulphite to the water, or of a crystal or two of sodium sulphite and of citric acid will be found advantageous.

F. Randall, in *The Amateur Photographer.*

THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY

Photographic Printing on Wood

A SIMPLE formula to print photographs on wood from reversed negatives is the following, says *The Process Engravers' Monthly*:—

The sides of the wood-block are rubbed with heated wax or paraffin. This is to keep moisture from injuring the wood. Three solutions are kept in stock ready for use:—

1. Gelatine, 16 grs. to 1 oz. of water.
2. Silver nitrate, 80 grs. to 1 oz. of water.
3. Citric acid, 40 grs. to 1 oz. of water.

The white of an egg is beaten to a froth and left standing over night.

To sensitize a block, take: White of egg, 1 dram; gelatine-solution, ¼ dram; best zinc white, ⅛ oz.; ammonium chloride, 5 grs. Rub these to a paste in a glass-mortar, and while rubbing drop slowly into the paste 30 minims of the citric-acid solution and 30 minims of the silver-nitrate solution. Paint this on the wood-block very thinly, seeing to it that the block is completely covered. Dry quickly in the dark and print under negative as usual, timing the print so as to keep a record of what length of time is best, which will vary with different negatives and different lights. Fix the print in the darkroom by holding it face down for a few minutes in a tray of hyposulphite of soda. Wash the hypo from the face of the wood quickly and remove the moisture with damp chamois or blotter. Dry quickly. This will give a brilliant print with no film to interfere with the gravers. The wood is not injured by chemicals if care is used to wet only the surface of the block.

Exposure by Fluorescence

IT is rather an extraordinary thing, when one comes to reflect upon it, that the image of an X-ray negative is the result of less than one per cent of the rays which strike the emulsion of the plate, says *The Amateur Photographer*. The rest of the rays go right through the plate and perform no function at all. It is not surprising, therefore, that there should have been such efforts to use this waste-energy by means of fluorescent intensifying screens which catch it on its prodigal career and return it to the plate in a photographically active form. The screen fluorescence accounts for four times as much of the result on the negative as does the original energy of the rays absorbed in the emulsion itself. The latest development along this line is the use of double-coated films with two intensifying-screens, the fluorescence acting directly from screen to emulsion in both cases, and in this way much more effective results are obtained.

Duplex Exposures

THE old method of trick-photography by means of which the same person may be shown in two or more positions upon the same plate is well known to most photographers; but a recent inquiry as to the best way to set about it suggested an application which in some circumstances would be of practical value and not a mere curiosity. For the benefit of those who may not understand to what we refer, continues *The British Journal*, we may explain that it is quite easy to make photographs in which a man may be playing a game of chess with himself, or a lady standing and singing while she also appears to be seated at a piano, playing the accompaniment. This is done by the simple expedient of providing the lens with a very deep box-hood with two flap-shutters overlapping very slightly in the center. One of these is closed and the sitter photographed in the first position; it is then closed while the sitter moves into the second position, when the other shutter is opened and the exposure made. The two halves of the picture then appear so perfectly vignetted into each other that no junction is visible. The application suggested is that this trick may be employed when it is desired to make two views of any object without a line of demarcation appearing between them. For example, the front and back of a vase or statue or two views of a piece of machinery may thus be made, or a figure photographed in front and behind for a fashion-plate. A little practice may be necessary to get the exact amount of overlaps, as if this be too great there will be a rather lighter band down the center; and, if too little, a dark line; but this can be adjusted easily. The necessary fitting can be made of cardboard and must be well blackened inside.

Squeegeed Prints that Stick

THIS trouble is more often met with in summer than in winter, says *The Amateur Photographer*, and our inquiries have shown recently that many photographers who have hitherto been free of it are now encountering it. The cause is not hard to find, and the remedy simple enough. Some substances used to squeegee allow of much easier stripping than others. Celluloid, for example, seldom gives trouble, and the pulp-slabs especially made for the purpose and ferrotype plates are equally good. Glass is perhaps the worst of all; but, on the other hand, glass gives the finest gloss. If the surface to which the squeegeeing is done is perfectly free of any adherent particles, and has a very slightly oily character—nothing approaching what would be called greasiness—the only cause of the prints failing to strip properly when dry will be that the gelatine-surface of the print has begun to decompose. The change will be so slight that the sticking will be the only indication of it. This decomposition is much more rapid in warm weather than in cold. It may appear quite suddenly and without any warning, when all the conditions seem to be just the same as before. Fortunately, in formalin we have a complete and simple preventive. If, when the washing is finished, we place the prints which are to be squeegeed in a bath of dilute formalin for a few minutes, and then, without any further washing, take them out and squeegee them, we shall have no sticking. The strength of the formalin is not very important; one part of the commercial solution, which is known as "forty per cent," to from five to ten of water, is what is generally employed. Formalin being a solution of a gas (formaldehyde), there is nothing to crystallize out on drying, while the presence of the formalin during the drying is a powerful protection.

XUM

OUR CONTRIBUTING CRITICS

YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a six-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

PICTURE of the boy asleep. According to principles upheld by PHOTO-ERA, which I try to apply in my humble pictorial work, the composition impresses me as faulty. The figure occupies the right half of the picture-area; a group of toys, the other half. Perhaps, the element of fun is present—the lion coming around the corner to devour one of the unsuspecting group at the left. In the absence of any data, it is not clear whether the light was daylight or artificial. In any case, the darkest darks, including the boy's hair, are entirely too black. They lack character. On the other hand, the highlights of four of the animals, including the King of Beasts, are entirely too white—also without character. There appear to be no color-values in the picture. I should also like to see a little more space over the boy's figure. Sleep and pose are well rendered—about the only good points. Sorry to be so ungenerous.

B. A. FARLEY.

HERE is the opinion of a beginner in camera-work. From what I have learned by reading PHOTO-ERA carefully and studiously, the pictures and the interesting criticisms by the Editor and the contributing critics, I think that I have learned something about pictorial composition. Has not Mr. Murray two pictures here? Separate the groups of toys at the left, from the head of the boy, and there you are! I am glad that the lion is walking ahead of the lamb—less danger of it being devoured by the King of Beasts. How would it look to have posed the sleeping boy near the left of the picture? Better, you think! Perhaps the animals in white would look better, as accessories, if toned down to what you call a "lower key."

B. E. CASSELL.

THE idea was well conceived, and the technique so far as the exposure, developing, printing, etc., are concerned, is good. A background other than a plain one would have pleased me more—something to indicate the character of the room in which the picture was made. A child does not play with a studio-background behind it. The table, or whatever the little boy is resting upon, is entirely lacking in value, so that it is

THE PICTURE CRITICISED THIS MONTH

impossible to tell what it is, or where it ends, so evenly does it blend into the background. The animals are fairly well placed. I think an improvement would have been made if the boy's other hand were on the table, grasping one of the animals; the lion, for example, to show that he had been overtaken by "the sandman" while at play. If it can be done, let Mr. Murray try it again and give twice the length of exposure, if possible, in order to produce better values in the table and also at the top of the head, which is rather lacking in detail.

E. H. Washburn.

Cloud-Negatives

Speaking of cloud-negatives *The British Journal* says that it is not a good practice to start out with the intention of making cloud-exposures exclusively, as this tends to accumulate a number of negatives of very much the same character. It is better when out on other work to devote a plate or two to any particularly good cloud-effect, and to make a note which can be transferred to the bottom edge of the plate as to the point of the compass at which the camera was pointing and the time of day when the exposure was made. Although it is possible occasionally to obtain good results on an ordinary plate without a yellow screen, it is much easier to do so with an orthochromatic plate and a proper filter. There is really no reason why the landscape-photographer should ever expose an ordinary plate and many reasons why he should use color-sensitive ones. It is a mistake to use too dark a color-screen for sky-work, the K2 strength being quite sufficient to give the proper contrast. If a deeper color be used the blue portions will come out practically black and the sky will look too heavy for the view. In our idea most sky-negatives are too thin. This adds considerably to the difficulty in printing them to the proper depth to suit the subject, particularly when enlarging or printing upon bromide paper. This often leads to an unnatural appearance in the finished print and causes some people to contend that a perfect result can be obtained only when the clouds are obtained upon the same plate as the view. The real reason for this is that in this case the clouds have received full development, which can also be given with a properly screened plate. We may perhaps be allowed to remind those who are not experienced in this branch of photography that it is always desirable to include a narrow strip of landscape below the clouds, so that the negative may not be used upside down. This has the additional advantage of preventing the camera being pointed to the zenith and the resulting clouds printed in near the horizon, a fault which has often been committed.

To Clean Glass

When glass has to be perfectly clean, as is very necessary in some photographic operations, says *The Amateur Photographer*, it is best, after washing it well in the ordinary way, to rub over it a little of a paste made by mixing up whiting with water to each ounce of which four or five drops of liquor ammonia have been added. The mixture should be well rubbed in, allowed to dry on, and then removed by wiping with a clean rag. A final rub with another fluffless cloth will leave the surface ready for any purpose.

Photographs by Moonlight

It is perfectly possible to get landscape-photographs by the light of the full moon, although such photographs, when obtained, do not look at all like the so-called "moonlight-effects," but are difficult to distinguish from photographs made by daylight. The principal difference, *The Amateur Photographer* goes on to say, is that the outlines of the shadows are largely obliterated, since the exposure has to be so long that the moon has moved through a considerable angle. With a lens working at F/4 and an extremely rapid plate—nothing is gained by the use of an orthochromatic one—and open landscape-view can be obtained with an exposure of three hours. If the country is white with snow or frost, the exposure required is very much less than this. Views that are at all shut in, or which have heavy foreground-shadows, cannot be obtained by moonlight.

XUM

OUR ILLUSTRATIONS

WILFRED A. FRENCH

As we contemplate Mr. Mortimer's picture of the Mayflower, which is about to begin that long, stormy and eventful voyage to the shores of the New World, we are reminded of our own Ship of State, now at the mercy of a tempestuous sea. But, like the good ship that brought the dauntless Pilgrims to a port of permanent safety, our own craft, manned by a staunch and loyal crew and with a *real* Farragut at the helm, will enter that port towards which the eyes of all loyal and stout-hearted Americans are turned. This, as I have stated, is the historic month of September. In this instance, it is notable because on September 6 (September 16, new style) the Mayflower departed from Plymouth, England, for the Plymouth that was to be. The Mayflower was a small craft, even for those primitive days—only of about one hundred and twenty tons. She was three-masted, square-rigged, with a lateen-sail on her mizzenmast. An excellent model may be seen at the Smithsonian Institution, Washington.

Although the tercentenary of the Landing of the Pilgrims at Plymouth, Mass., falls on December 21, 1920, the celebration of this event notable in the history of New England is already anticipated by the daily press and historical societies of the Bay State. With the courteous collaboration of F. J. Mortimer, the distinguished English photo-pictorialist, PHOTO-ERA is in the van and invites its readers to share in the satisfaction of holding a preliminary celebration of its own. The under-mentioned details, omitted for lack of space from the historical sketch on page 124, will be found very interesting to students of American history. They were derived from William Bradford's History of Plymouth Plantation, published in two volumes, by Houghton Mifflin Company, Boston, U.S.A.

Following the adoption of the compact, made and signed in the cabin of the Mayflower, the Pilgrims chose John Carver their first Governor of the colony. William Brewster, although not ordained, was to be spiritual head of the church, and Myles Standish was made captain and military commander. And so, on the morning following the signing of the compact, the advance-guard of the Pilgrims made their first landing on American soil, at what is now Provincetown, on Cape Cod. With sixteen men under his command, Myles Standish began his exploration of the Cape. A march of a few miles, during which they found signs of Indians, convinced the explorers that this part of the land offered no prospects for a successful settlement, and they so reported on their return to the ship.

It was then determined to take the shallop, a small vessel of from twelve to fifteen tons, and explore the bay, and this was done. They followed the line of the coast as far as what is now Wellfleet, where they were attacked during the night of their first bivouac by Indians; but the enemy fled, and the Pilgrims, to mark the spot, named it The First Encounter. Continuing their way around the coast, in a few days they landed on an island within sight of what seemed to them "a goodly land," and here they went ashore. This was Clark's Island—so named in honor of the mate of the Mayflower—and here, according to their chronicles, "on Sabbath day we rested."

On the following morning they sounded the harbor and found it fit for shipping, and on the same day the first landing was made, on December 21 (N.S.), 1620, the Pilgrims had selected their permanent home in the New World.

They returned to the vessel in the harbor of Cape Cod and, several days later, the Mayflower sailed across the five and twenty miles and anchored in Plymouth harbor, and the historic and memorable voyage was at an end—the wearied Pilgrims had found a home, and were at last at the end of their wanderings by land and sea. The women and children were left on board the first night, and fortunately so, for a terrific storm arose and the pioneers, without shelter, suffered terrible privation. But in a few days a common house, twenty feet square, was finished for general use until quarters of their own could be erected by the families. Four days later, a platform was erected on the hill and three cannon from the ship were planted to command the valley in the event of an attack by the Indians—a peril that ever seemed imminent from the signs of hostility which had been seen since their first arrival in the bay.

But the readers who are picture-makers have been eagerly anticipating details of Mr. Mortimer's photographic methods, with particular reference to the picture that embellishes the front-cover and page 125. I regret as much as anyone the absence of data. All I can say is, that the picture was staged like a scene in a motion-picture play. The conception of the subject, the selection of the locality, the preparation of the details and the execution of the entire plan are highly creditable to the eminently artistic skill of the photographer. "The Departure of the Mayflower" ranks with Mr. Mortimer's finest creations in originality of design and in facility and breadth of performance. It was a happy thought to have the sun burst forth at the moment the friends on shore bid godspeed to the little craft, as it recedes towards the western horizon—towards the west, the land of promise.

If breadth of pose, grace of line and felicity of expression characterize the interesting figure of the frontispiece, the Toloff Studio (J. D. Toloff, proprietor) of Evanston, Ill., cannot be lacking in artistic atmosphere. If the ladies of Chicago desire animation in their portraits, and local photographers continue along conventional (conservative) lines, they may find that some of their customers may motor out to nearby Evanston in search of portraits marked by an air of vivacity, *chic* and *esprit*. No data.

The architectural sketches by Edward Lee Harrison are, as stated previously, decorative, rather than convincing examples of photographic-technique. Data: "Italian Renaissance Façade"; page 116; 3A Graflex; 7-inch Velostigmat Series II; stop, F/11; three-time ray-screen; 1/10 second; Azo Glossy.

"Renaissance Public Building"; page 117; bright sun; Vest-Pocket Camera; Vinco anastigmat; stop, F/16; 1/25 second; Azo Glossy.

"Italian Renaissance Garden Sketches"; page 117; Vest-Pocket Camera; Vinco anastigmat; stop, F/6.8; three-time ray-screen; 1/25 second; Azo.

"Italian Renaissance Villa and Gardens"; page 118; 3A Graflex; 15¾-inch Bis-Telar Telephoto lens; stop, F/11; 1/35 second; Azo.

"Flemish Renaissance Façade"; page 119; 3A

Graflex; Velostigmat Series II; stop, F/6.3; 1/100 second; Azo.

The four landscapes by Allen E. Churchill, pages 120 to 123, again illustrate this photographer's unerring eye for beauty of line and harmony of composition. Faultless technical ability is one of Mr. Allen's strongest assets.

There is scarcely an art-store or picture-shop in the country that does not carry a supply of enlarged photographs of sea-gulls. The popularity of these pictures of flying seagulls began several years ago. The prints came from the Pacific coast, one of the sources being the studio of Harold A. Taylor, Coronado, Cal. Data: February; on Pacific Ocean off San Diego, California; Graflex 5 x 7; 8½-inch 1C Tessar lens; Standard Orthonon; metol, pyro and hydrochinon; No. 7 P. M. C. Bromide.

By issuing the National Parks Portfolio, the Department of the Interior has performed an eminent public service. The last issue of PHOTO-ERA was embellished with one of the beautiful halftone plates of the section devoted to the Grand Canyon of the Colorado River. In the present issue, page 129, will be found an inspiring scene in the Mount Rainier National Park, Washington, expressive of the words—"Everywhere, between and touching the icy glacier fingers, are gorgeous gardens of luxuriant wild flowers." In his lectures on the American National Parks, Herbert W. Gleason, the distinguished photographer of American mountain-scenery, speaks in terms of the highest enthusiasm of the wonderful flora of Mount Rainier.

The National Parks Portfolio contains an introductory booklet of eight pages, nine booklets of twenty-four pages each, and one booklet of thirty-six pages, illustrating and describing the national parks. The entire portfolio contains over three hundred halftones, mostly of full-page size. The price is thirty-five cents for the pamphlet edition and fifty-five cents for the bound one. Remit only by money-order or U.S. Currency to Supt. of Documents, Government Printing-Office, Washington, D.C. No charge for postage to points in the U.S. and territories, Canada and Mexico. Postage, necessary for other countries, must be included in the remittance.

The subjects portrayed by Lehman Wendell for his article, pages 131 to 136, have a marked photographic value and should stimulate lovers of nature to get in closer touch with the gentle creatures of the woods and the fields. They are also the source of much entertainment, as may be seen from Mr. Wendell's pictures, the making of the which is described in his article.

As usual, the illustrations of William S. Davis, pages 139 to 141, are eminently interesting and instructive from an artistic viewpoint. Data: "Yachting-Weather"; page 139; made against the light at 9 A.M. in midsummer; bright light; pocket camera; rapid rectilinear lens; stop, F/16; 1/100 second; Ansco Speedex film; clouds "printed in" from another film negative.

"The Towboat"; page 140; August, 9.20 A.M.; sun shining through thick fog; 3¼ x 4¼ hand-camera; 6½-inch single-achromatic lens; stop, F/11; 1/60 second; Cramer Inst. Iso plate.

"Getting Under Way"; page 141; clear autumn day, 10 A.M.; made from the shore; 6-inch Ilex anastigmat; stop, F/6.3; Ingento series A ray-filter; 1/25 second; Cramer Inst. Iso plate; section of negative about the size of a postage-stamp used for the enlarged print.

The group by Alexander Murray, page 143, gained the artist an Honorable Mention in the "Domestic Pets" competition, held by PHOTO-ERA in November, 1918. Artistic composition and true tonal values are the distinguishing characteristics of this engaging scene. Data: October 1918; 3.30 P.M., bright sunlight; Vest Pocket Kodak, regular equipment; largest stop; 1/25 second; Eastman Speed film; Amidol developer; enlargement on P. M. C. Bromide No. 3.

Warren R. Laity is a worker of striking ability of which his spectacular portrayal of the Capitol, at Washington, page 144, is conclusive proof. His intention, here, was to produce a typical, brilliant effect with the beautiful dome of the Capitol reflected clearly in a mirror-like pool in the foreground. It is curious that the image of the dome should appear in a pool of water, instead of on the wet pavement. Data: May; Century view-camera 8 x 10; exposure 15 minutes; Orthonon plate; enlargement on Enlarging Cyko Studio; Amidol developer.

Advanced Workers' Competition

IN some respects the competition with the spirit of spring as a theme, was a disappointment. It seemed difficult for many participants to acquire the frame of mind to perceive the poetic side of the subject. Literal, matter-of-fact, prosaic? Yes, many of them were. The mere representation of a bit of landscape showing spring-flowers, or of a group of children picking flowers in the woods or in the fields, was not enough. Of bird-life in the open, during March, April or May, there were no examples. One competitor interpreted the theme by photographing a bunch of rhododendrons, above which appeared the slightly diffused head of a young girl—the veritable spirit of spring. However, the contributions were numerous and, in the main, satisfactory.

J. Herbert Saunders, of Leeds, England, and a consistent competitor, presents a happy conception of the subject—a maiden with an armful of foxglove. With the exception of a slightly awkward position of the left arm, the figure is up to the high artistic standard of Mr. Saunders. No data.

By a clear division of planes and an intersection of diagonal lines, John Dove has evolved a novel and pleasing pictorial design, Page 148. Out of an atmospheric setting emerges a branch of pussy-willows, the popular harbingers of spring. Data: April, 4 P.M; sunlight; 5 x 7 Empire State view-camera; 8-inch Bausch & Lomb rapid rectilinear lens; Ideal color-screen; stop, U.S. 64; ½ second; Orthonon plate; Rytol; Azo paper.

Even with heavily accented blacks—which is not correct of true art—Leopold Zwarg's picture, page 149, is a delightful interpretation of the subject. Spring is in the air, and humans seem to enjoy the privilege to be out of doors on a perfect April day. The scene portrayed evinces the pleasure the artist must have derived from planning and making this engaging picture. Data: April, 5 P.M.; bright light; 4 x 5 Premo; 9½-inch Goerz Dagor; stop, F/6.8; 1/25 second; Standard Orthonon; pyro-soda; Artura Carbon Black, Buff Grade E.

The example to be emulated by participants in the "Architectural Subjects" competition, page 150, appeared in January PHOTO-ERA, 1919. It has been admired universally and cannot but gladden the eyes of our new subscribers. Data: March 17, 1918; 2 P.M.; bright sun; 4 x 5 Sanders Camera; Struss Pictorial Lens; 12-inch focal length; stop used, F/5.5; K-2 color-screen; exposure 1/12 second; Standard Orthonon Plate; Rodinal, tank-development; 11 x 14 enlargement on Montauk Bromide No. 3; M. Q. developer; original

(*Continued on page 164.*)

XUM

ON THE GROUND-GLASS

WILFRED A. FRENCH

One Special Writer Retaliates

Editor of the Ground-Glass: Your shot aimed at magazine-writers has drawn my fire, as I am one of them. You hit the bull's-eye; there's no mistake. It has taught me a lesson—I mean a photographic one. You have an effective way of imparting photographic information. I shall be careful, hereafter, how I employ photographic terms. By the way, a well-known local amateur photographer informs me that in your "gentle reminder" in your July number you neglected to mention another photographic solecism, viz., "developing the negative," used frequently by us special writers. Judgment! "Lay on, MacDuff, and damned be he who first cries, 'Hold, enough!'"

Now, as for your readers—vocational and amateur photographers—they constantly make mistakes themselves. I can mention only two; but they are serious enough to approximate a dozen minor ones.

I attended a lecture on the history of photography, at the Polytechnic Institute, last winter, during which the speaker referred to the product of Daguerre's invention (discovery, if you like) as the daguerreotype, which, each time, he took pains to pronounce very plainly, "dah-gherr-oh-type," in *four distinct syllables.* The following day, I consulted all the English dictionaries and other authorities in our Public Library, and found that the lecturer of the previous evening was absolutely correct. And yet I have not met a professional or amateur photographer who departs from that vile corruption—"deguerryotype," and in *five* distinct syllables, at that!

In my younger days, I frequently heard the term, "ferrotype," that delightfully ingenuous and quickly produced positive on a very thin piece of ironplate (Latin, *ferrum,* iron), which fact yields the word, ferrotype. This term is heard little nowadays; for not only an ignorant public, but amateur photographers and the ferrotypers themselves call these metal portraits "tintypes," when there is *not even a suggestion of tin in them!*

It is all very well for you to pick flaws with us special writers; but according to an old saying, "those in glass-houses should not throw stones."

ALFRED T. WISE.

Mr. Wise is entirely correct in his statements, except, perhaps, that if he had read PHOTO-ERA carefully during the past eleven years—probably too great a sacrifice of time to expect from a special writer who does not appear to be an ardent camera-worker—he might have noticed my criticism of the loose term, "developing the negative." Correctly speaking, a negative is the result of several successful operations—the exposed dryplate or film (bearing the latent image) is developed, rinsed and immersed in a hardening-bath, fixed and then dried. Having passed through these different stages, the exposed plate or film becomes a negative, and not until then.

The proper pronunciation of the word, daguerreotype: This subject has also been dealt with in several departments of PHOTO-ERA during the past eleven years, the only pronunciation of this generally mispronounced word recognized by the Editor being the one Mr. Wise has found to be correct, viz., "da-gherre-o-type," the suffix, "otype," only being added to the name of the famous Frenchman, Daguerre. The misnomer, "tintype," has never found its way into the pages of PHOTO-ERA since the publication came under the sole management of the present Publisher—January, 1907—except to be explained or ridiculed, or when some breezy contributor—and why not Mr. Wise, himself?—indulged in the picturesque, but emphatic and significant, expression, "not on your tintype!" [Editor.]

A Photo-Play for Photographers

A FILM-PLAY of unusual interest to practical photographers who have been unable to procure one of their favorite commodities for several years, on account of the war, is "The Man Who Won," with Harry Morey playing the principal part. I saw it at the Park Theatre, recently, and found it so engrossing with its photographic secret not revealed until at the every end, that I was determined to recommend it to PHOTO-ERA readers. I should advise them to lose no time to learn at what theater in their city or town this play will be presented. If it "has been and gone," at one house, it may be seen later at another. Do not miss it!

Photography to the Rescue!

THE *Insurance Monitor* appears to be very much disturbed because the originals of the Declaration of Independence and the Constitution of the United States are liable to destruction by fire, and calls upon the National Board of Underwriters and the Daughters of the American Revolution to remove these precious documents to a place of permanent safety.

But why this fear and apprehension? There is still hope that by means of photography many perfect and permanent copies of these valuable documents may be made, and with ease and celerity, as has been done for many years in similar cases. There will be no need of fear after some reliable photographic specialist in Philadelphia shall have made copies in duplicate and the negatives are carefully preserved. Of course, for sentimental reasons, the original documents should be carefully guarded; but with regard to the needs of those who wish merely to consult or to view the originals, a photographic copy will serve equally well.

The Point of View.

"WHAT a difference a change of viewpoint makes in a photograph is demonstrated by the interesting anecdote in the August Ground-Glass Department," writes an appreciative correspondent. I am glad that the story explained a point that is characteristic of the average method of using the small hand-camera. The observant reader may have noticed that many snap shooters hold their little cameras waist-high, quite unmindful of the fact that at such times their eyes are about twenty inches above the eye of the camera and that this makes considerable difference in the result. This is particularly noticeable in an open-air portrait, with the subject only a few feet distant from the camera. The remedy is to use a direct-view finder, which can be easily attached to the camera.

PHOTOGRAPHIC THRIFT

Whoever sends us a letter that we consider of practical photo-saving value, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE

Practical Saving-Methods

EDITOR PHOTO-ERA MAGAZINE:

I wonder how many thousand tons of paper would have been saved had those tables for instantaneous exposures never been published, beginning:

A man walking three miles per hour moves 4½ feet per second.

A vessel traveling nine knots per hour moves 15 feet per second.

Flight of a pigeon or falcon 61 feet per second.

Flight of swiftest bird 294 feet per second.

A cannon ball 1,625 feet per second.

And so on in miserable, endless continuation. What good are these notes anyway? Do you know when a man is walking three miles per hour—or sixty? Would you know if a vessel was traveling nine knots per hour? Do you even know what a knot is, or a falcon, when you see one? What is the name of the swiftest bird, anyhow? What would you do if you saw a cannon ball making time toward you through the empyreal blue; figure out how many feet per second it was traveling, or move to other quarters?

By the way, did you know that your pasteboard plate-boxes could be torn up and the cardboard used to protect prints in the mail? That old prints could be trimmed into a panel, border-lines ruled just inside the edges with India ink, to make bookmarks? That a serviceable tank-clock can be made by drawing a clock-face on a piece of white mount and fastening a movable hand in the center with a paper-fastener? That to save tissue and time in dry-mounting, get an Eastman Mask Chart, place the tissue on top, mark dots on tissue hard enough to break through tissue at proper points shown by chart underneath, remove from chart, place ruler from dot to dot, and trim with old safety razor blade?

FRANK KING.

EDITOR PHOTO-ERA MAGAZINE:

For fifteen cents I made an old Post-card Folding Eastman camera—worth about fifty cents—into a "so-near-new" one that I would not take six dollars for the same camera to-day. I dug it out to use a Watkins pinhole arrangement, and found that the bellows sagged at any point less than its 6½-inch extension, and it was so worn that it had holes and slits. Stretching it out to the end of the board, I locked it. To one-half bottle of Bixby's jet-oil shoe polish I added ½ teaspoonful of bottled-glue. With the small sponge fastened to the end of the wire attached to the cork I washed the bellows lining thoroughly. Next, with a piece of one-inch black satin-ribbon, split lengthwise, with selvedge clipped at intervals—laid flat on a board, I washed them thoroughly with glue and rubbed it in with my fingers. Then, I pasted this, beginning at the lens-board, to the inside of the bellows, letting one-half of the ribbon stick to the two sides—at right angles. After this I took the ice-pick and ran it along the bellows to bring the sagging edge back into shape.

When the now square edges and lining were about half dry, I closed the camera about ⅛ closed, pressing the ribbon into place with the ice-pick, where it would not stay smooth. Then I let it dry in the shade.

The third operation was to go over the entire camera with the jet-oil, which dried in ten minutes and was just like new. It had the luster of a new camera, and was well dyed and it had no odor, neither did the polish rub off. The bellows was stiffened thoroughly, and after closing the camera the four edges of the bellows folded back into perfect shape and as rigid as new. Evidently, the ribbon contracted to some extent, which brought the bellows back to 6½-inch extension.

Lastly, this rejuvenated camera has the rising-front and sliding-base. If I get tired of landscape-work with the pinhole it is *ever ready* for any lens and shutter of the right size that I have and wish to try out.

It took just thirty minutes to dip the old camera into this photographic fountain of youth.

JANIE GWIN MATSON.

The Effect of Moisture on Lenses

USERS of cameras fitted with high-class anastigmat lenses do not always exercise proper care in protecting these delicate optical instruments against deterioration which is caused as much by dampness as by unnecessary exposure to strong light. We have pointed out very frequently, in these pages, the necessity to protect lenses from daylight and even strong artificial light, when not in use. Of course, when cameras of the reflex or folding types are closed, the lenses are well protected against exposure to light. Lenses that are attached to studio-lenses not provided with a cap, but remain constantly uncovered because an inter-lens or inside shutter is used, should be covered at least with the focusing-cloth or a regular lens-cap. In spite of this protection, there is danger of dampness, against which proper protection should be taken. When anastigmat lenses are used in climates or localities where extreme dampness prevails almost continuously, it is well to keep them in tightly closed leather cases when not in use. It may also be well to provide a convenient place inside the box where a quantity of calcium chloride may be kept constantly, as this chemical has an affinity for moisture. It is claimed by some authorities that a single drop of water dropped accidentally upon the surface of a lens of the anastigmat type, and left there any length of time, will leave a trace that cannot be removed, not even by the manufacturer of the lens. Unlike ordinary lenses of the older types, anastigmats consist of glasses that are highly sensitive to prolonged exposure and dampness and are subject to easy corrosion, owing to the chemical constituency of the glass used in making these special types of lenses.

It must be remembered that optical glass is quite different from window-glass. The latter is quite tough, in comparison, and rain, sleet and hail, driven against the window-panes with great force, seems to have no effect upon them. Yet the glass of lenses, microscopes and binoculars is peculiarly sensitive to atmospheric conditions including moisture. As everybody knows, moisture settles upon steel, brass and silver, which have to be cleaned periodically to keep them looking bright.

W. A. F.

XUM

ANSWERS TO QUERIES

J. W.—**Drilling glass** is rather a difficult matter for an amateur. The usual method is to use a steel-drill—a brace and a center-bit will do—lubricated with turpentine. A professional glass-cutter can manage this easily enough; but with the amateur it generally results in a good deal of breakage, mainly owing to the tendency to drill too fast.

K. P. E.—**Stopping down when enlarging is of no advantage beyond a certain point.** On no account should the lens be stopped down any more than is necessary to enable you to obtain a sharp enlargement. You will find that when once this stop has been determined there will be no necessity to alter it whenever you are enlarging, no matter how large the enlargement may be, provided that the size of the original negative is not increased.

C. O. H.—**To form and to manage a camera club** is not so difficult a matter provided the right men may be found with the necessary enthusiasm, intelligence, foresight and enterprise. A great aid to those who desire to form a new camera club will be the generous and well-written accounts that have appeared in PHOTO-ERA magazine. The following issues of PHOTO-ERA will be of extreme benefit and interest:—October, 1911—The Providence Camera Club, by H. Ladd Walford; October, 1912—The California Camera Club, by L. J. Stellmann; August, 1916—The Detroit Camera Club, by Philip M. C. Armstrong; June, 1919—The Chicago Camera Club, by F. M. Tuckerman.

Copies of these issues, if on hand, may be had at one dollar each, with the exception of the issue of June, 1919, price twenty-five cents.

G. B. H.—**Although the regular film-pack developer ought to be most efficient,** another good one is the following, a 20-minute solution at 65 degrees. Dissolve the chemicals in the order named in half the quantity of lukewarm water, and then add cold water to the full amount.

Water	46	ounces
Metol	4	grains
Hydroquinone	15½	grains
Sodium sulphite, anhydrous	186	grains
Sodium carbonate, anhydrous	100	grains
Oxalic acid	3	grains
Pyro	19½	grains
Potassium bromide 10% sol.	22	drops

This is an excellent Ansco film formula. Should the resulting negatives prove too thin for your purpose, increase the time to 25 or 30 minutes.

J. K. O.—**Parabolic reflectors are now used extensively in photography.** They may be roughly described as being mirrors or reflectors ground or bent to a parabolic curve—a parabola being the section of a cone cut parallel to its slant side. If an illuminant is placed in the focus of such mirrors or reflectors, the reflected rays are parallel, which is only approximately the case with a spherical mirror. Parabolic mirrors are used in photomicrography and for various purposes where parallel rays are necessary. White reflectors of parabolic or paraboloid curve are used to obtain even illumination of the negative in enlarging by artificial light when a condensor is not employed. In process work, parabolic reflectors are used on arc-lamps, but not so generally since the "enclosed" type of arc-lamp has come into use, a semi-parabolic shade-reflector being used instead. Most electric or gas enlarging-outfits are equipped now with parabolic reflectors, and their efficiency is well known.

G. M.—**"Free from Dust,"** in your article—though written so by many—is not good English. You ask for a good model. Here is an old and permanently good one—"free of duty." Hence, "free of dust." "free of hypo," "free of bubbles."

W. D. K.—**An adhesive for labels** to be used on bottles may be made by mixing—in the order given—white dextrine 2 ounces, diluted acetic acid 1 ounce, water 5 ounces and methylated spirit 1 ounce. This formula makes an adhesive similar to that used on postage-stamps.

F. S. S.—**High-class lenses left uncapped in strong light,** when not in use, are apt to deteriorate, owing to the deleterious action of the light on the chemical constituency of the lenses. Even dampness, or frequent sudden changes of temperature, may exert a harmful influence on the sensitive nature of certain types of high-class lenses.

C. K.—**Inability to see picture in the view-finder** when the camera is placed on a level with the head of the camerist, or even higher, may be overcome by using a small pocket-mirror. The mirror should be held resting at the front end of the view-finder at an angle of about 45 degrees, thus reflecting the image downwards. This little trick was conceived and utilized by Wilfred A. French, The Editor, on his camera-tour through Bavaria in 1909, when, in photographing the streets of Rothenburg, he used his camera on a tripod. The discovery and application of this expedient is described on page 67 of the February, 1910, PHOTO-ERA and makes interesting reading.

J. V. H.—**The change from a rectilinear lens to an anastigmat requires close attention.** You say that your new roll-film camera, fitted with B. & L. Zeiss Tessar II B F/6.3 lens is causing you more trouble than your old box camera ever did, and that you cannot obtain sharp pictures. Since your new equipment has no ground-glass, it is of great importance that you estimate distances correctly. If you have a good idea of distance, and the trouble still continues, it may be due to the fact that the focusing-scale is not properly adjusted. An anastigmat lens must be focused very carefully, as a slight movement forward or backward renders the picture sharp or out of focus. We would suggest that you use stop F/8 and a shutter-speed of about $\frac{1}{50}$ of a second, and make several pictures without altering the stop or speed. With the lens and shutter set as indicated, you should obtain clear sharp pictures from about twenty feet in front of the camera to infinity. Should this test not prove satisfactory, we would suggest that you take the camera to a competent camera repair-man and have him check up the focusing-scale.

B. H. W.—**An F/4.5 lens stopped down to F/6.3 is identical in speed** to another lens that works at F/6.3. The speed in this case is not a matter of the construction of the lens, but the size of the stop.

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

The Associated Camera Clubs of America

THE Charter Membership list of this organization will close October the First at which time organization will have been completed and the formation of Lantern-Slide Interchanges, Print-Interchanges and Annual Salon will be taken under consideration by the members. Other matter of great importance will be considered, such as initiation-fee, increased dues to non-charter members, and ways and means to increase the efficiency of the camera clubs. This association, which originated with the Newark (N.J.) Camera Club, gives every evidence of becoming the one, much-needed organization in the photographic field, and, with the support of such clubs as Newark, Orange, New Britain, Portland (Me.), Portland (Ore.), New Haven, St. Louis, Kansas City, Baltimore, Philadelphia, Dartmouth, who up to August 1st were listed as Charter Members and with the added names of Cleveland, Buffalo, New York, Elmira, Oak Park, Grand Rapids, and Chicago, who have reported favorably, the A.C.C. of A. is bound to be the organization into which all camera clubs and photographic societies will eventually seek admittance. Any club that has not received complete information, or desires further data, can obtain same from the secretary, Louis F. Bucher, 878–880 Broad Street, Newark, N.J.

The Third International Photographic Salon

THE Third International Photographic Salon under the auspices of the Camera Pictorialists of Los Angeles will be held in the Gallery of Fine and Applied Arts, Museum of History, Science and Art, Exposition Park, Los Angeles, California, from January 3 to 31, 1920. The aim of the Salon is to exhibit only that class of work in pictorial photography in which there is distinct evidence of personal artistic feeling and execution. All work submitted to the Jury of Selection will be considered carefully and impartially. No picture is eligible that has been exhibited previously in Los Angeles. For further information with regard to conditions of entry, address Mr. Ernest Williams, Secretary, Room 31, Walker Auditorium, Los Angeles, California. The last day for receiving prints is Saturday, November 29, 1919.

Enlargements from Kinematograph Negatives

EDITOR OF PHOTO-ERA MAGAZINE: There appeared in the *British Journal*, some time early in the year, an article with regard to the use of kinematograph lenses for negative-making and the subsequent enlargement, which gives better results than with larger lenses and plates, and an attempt to explain in this way the appearance of superior definition on the motion-picture screen. It has astonished me that no one has challenged those statements. I intended to answer them myself; but that copy of the *British Journal* was mislaid.

Assuming that we are using a lens with good definition, the next contributive element is the silver-grain of the emulsion. So far as we are aware, the only methods of reducing the size of grain in a negative is by underdevelopment of full excessive exposure, and by the addition of an alkaline bromide to the developer. Sheppard & Mees have shown that the size of the grain in the negative may be reduced ten times by the addition of potassium bromide. Apparent definition on the motion-picture screen, when viewed at a distance, is much dependent on the contrasts of the positive. If you step close to the screen and examine the picture, the illusion is shattered.

The apparent smoothness of tones is due to the fact that the images of the silver-grains fall in a different place in each picture, and they are replaced so rapidly that the smoothness is an illusion, as is the motion. If one projects a single positive from the film in a stereopticon, there is plenty of grain apparent. And, again, the coarseness of grain in the negative would hardly be reproduced in the positive, because the positive is a fine grain emulsion usually greatly over-exposed and developed in a hydroquinone or M. Q. developer with a considerable amount of bromide.

ARTHUR F. ELDREDGE.

Anastigmats Free of Bubbles

FOR years before the war, in different photographic publications, here and abroad, it was stated again and again that the bubbles that appeared in German-made lenses of Jena glass were due to the nature of the product employed in their construction; that this was no sign of inferiority but, on the contrary, an indication of genuineness; that these blemishes were of no consequence, were rather to be desired, etc.

A well-known American photographer and exhibitor, who makes his own lenses, now with the U.S. Army of Occupation, photographic branch, in a letter just received in this country, states in substance: "I have come across a large number of German lenses, captured and otherwise, and find that they are flawless without exception, even the very largest, and I have learned that lenses free of defects were always kept in Germany and those not so were sent out for sale in other countries; also, that the Germans have been responsible for the publication of the statements above referred to, thereby intending to deceive the general public so they could work off their inferior goods."—*Flambeau.*

The same story has found its way into the American weekly press and elsewhere, and is generally accepted as true. Experts, however, and eminent physicists are inclined to doubt the statement of an individual who professes to be a photographer, an exhibitor and an optician ("making his own lenses")—a rare combination, indeed! Assuming the story to be true, it may be that this accomplished person has been misled by confounding some lenses of the older types of lenses—Euryscopes, for instance, which have been made entirely free of bubbles—with certain types of anastigmats. It is also not improbable that the Jena opticians have utilized the perfect core of a pot of optical glass in which no bubbles were formed, unless, indeed they have introduced certain improvements in the process of optical glass manufacture, whereby they are able to obtain a product that is absolutely flawless.

But *à quoi bon?* It would be a triumph of technical skill, to be sure; but a lens constructed of such optically

perfect glass would possess no greater speed or greater efficiency than one dotted with bubbles. It has been proved by scientific tests that these bubbles, which are caused by gases formed in the melting-process, are absolutely transparent, and there is no appreciable resistance to the passage, through the lens, of rays of light. At least, it has been shown that these bubbles have no effect upon the formation of the photographic image. As to such lenses being rated as seconds by the manufacturer and sold to gullible customers in America, that is utter nonsense. I know, as a matter of fact, that anastigmats with a few or many bubbles have been sold and used not only in France and England, but in Germany where they were made. It may not be too much to say that German anastigmats "marred" by the presence of bubbles have been in great demand in England and America during the past four years, but were not always obtainable. For the benefit of those who prefer absolutely flawless anastigmat lenses, we will add that they need not wait until such rarities are imported from Germany—if, indeed, they exist. They will soon be able to obtain them from our own native optical works; for it has been asserted that there is not a thing made in other countries that we are not able to make equally well—or better.

WILFRED A. FRENCH.

Henry A. Strong

HENRY A. STRONG, for more than a quarter of a century the president of the Eastman Kodak Co., of New York, died at the family residence in this city on July 26, aged 81 years.

Mr. Strong had been a successful manufacturer of whips for many years as senior partner of the firm of Strong & Woodbury, when he became interested in the photographic business, in 1881. George Eastman was at that time manufacturing dryplates, and it was Mr. Strong who had the vision and the nerve to back the then small enterprise with a few thousand dollars. The business was conducted at first as a co-partnership under the firm-name of Strong & Eastman, but its rapid growth demanded larger resources and it was but a short time before it was incorporated and additional capital interested.

Mr. Strong sold out his interest in the whip business in the year 1895 when he took an active interest in the photographic business which had then become the Eastman Kodak Company. In 1904 he retired from close association with its affairs, but remained on the board of directors as president. His business success was known, of course, to the world; but it was in Rochester, and particularly among those who were closely associated with him, that he was most appreciated. He had not merely those qualities of uprightness and integrity that gave him the respect of business men, but a largeness of heart—and a happy way of showing it—that endeared him to those who worked with and for him.

He was not merely generous in a big way, a liberal giver to the charities of his home-city, but he was thoughtful in the little things. He had the happy faculty of carrying with him an atmosphere of good cheer; a hard worker, until his later years, there was always time for a pleasant word of greeting, a winning smile, a merry quip or jest. And these he passed along, without favoritism, to the office-boy as freely as to a fellow-director. It was all spontaneous, the simple, unaffected evidence of his goodness of heart.

Photography owes much to Henry A. Strong, for he it was who first had faith to put money into the business that Mr. Eastman was developing. Rochester owes much to him, not alone for his backing what is now its greatest industry, but for his charities and for his good citizenship.—*Studio-Light.*

Our Illustrations

(*Continued from page 159*)

diffusion in original negative reproduced without modification.

Beginners' Competition

"IN BOY-LAND," page 153, pleases the eye by its spontaneity—lack of apparent preparation and suggestion. The manner of lighting would appear open to criticism, for the boy at the right, although in full sunlight, is weakly defined—almost merging in the background. On the other hand, the boy at the left stands out quite conspicuously, the sunlight falling directly upon him. Instead of two of the models wearing (for this occasion) dark jackets, and one of them none at all, might it not have been better had all of them worn light-colored garments? In that case they would be relieved more forcibly against the rather attractive background. Data: May, 2 P.M.; 4 x 5 R. B. Auto Graflex; 9½-inch Wollensak Velostigmat; stop, F/11; 1/50 second; Eastman Special developer; Velox semi-gloss; M. Q.

A slanting tree, or one about to fall, seems to impress the average amateur-camerist as an artistic object, and worthy the subject of a picture. This thought must have actuated Miss Waas when she composed her interesting rural picture, page 154. Not satisfied with the pretty view of the open field beyond, the young artist became prodigal and included the rather uninteresting foreground. The pool with the reflection of a tree that forms a black vertical line running from the top to the bottom of the entire picture is obviously superfluous; and distracting, besides. By covering up one and one-quarter inches of the foreground, one beholds a complete and satisfying picture, which, however, could be improved by lightening up the unnaturally black tree-trunks and branches. This can be done easily on the back of the negative. Data: May, 2.30 P.M.; intense sunlight; 2¼ x 3¼ Ansco Speedex; Velostigmat lens; stop, F/6.3; 1/25 second; film developed in Eastman Special developer; print on Velvet Velox developed in M. Q.

Our Contributing Critics

THE picture offered this month to our contributing critics for consideration is "The Lilies" by Louis S. Clarke. Data: August; 5 x 7 Century camera; Spencer lens; Cramer Iso plate. There is an ever-increasing interest being shown in this department and we hope that subscribers and readers will send us pictures to be reproduced and criticised for the benefit of all.

The Chaffey Camera Club

WE take pleasure to note the enthusiasm and consistent progressiveness of the Chaffey Camera Club, Ontario, Upland, California. We were privileged to receive copies of the club-programs from 1914 to 1919 inclusive and were much impressed by the effective lectures already given and those planned for the near future. Meetings are held the second Tuesday of each month at the Chaffey Library. Further particulars may be obtained from the secretary, Mr. Elmer Berg.

LONDON LETTER

CARINE AND WILL CADBY

SINCE our last letter was sent off we have received notice from the Chief Postal Censor that even matter sent under "D" permits for publication abroad need no longer be forwarded to Strand House for examination by the Postal Censor.

Ours was a "D" permit, and although we notified our readers months back of a withdrawal of censorship as regards other matter, our letters to PHOTO-ERA have until now had to go before the Censor. So this is our first letter posted direct since February, 1917, and except for the actual cessation of hostilities, no other event has brought home to us so vividly the real relaxation of war-conditions. Not that the Censor has ever found anything in our letters to run his blue pencil through, as has been kindly pointed out by our Editor some months back in a note appended to one of our letters. But for all that, the feeling of release is very real, and we take up our pen this time with an added sense of freedom and zest.

We have only within the last few days received copies of PHOTO-ERA MAGAZINE from January to June of this year. These, through some mistake, had not reached us before. Possibly, the long interval in which we had been without news of the magazine lent zest to our perusal of the six copies all at one sitting. Anyway, we were struck by the general advance the magazine has made, which was more noticeable than if we had become gradually used to it, a little at a time every month.

One feature that particularly struck us was the illustrations. Used, as we have become, to the war-time printing on this side of the water, we were astonished at the excellence and beauty of the reproductions. It was as if we had got back to the era of careful work of pre-war days, and it was refreshing.

The Camera Club meditates carrying out a photographic survey of London. The idea is to provide future generations with a complete pictorial record of London in 1919. This is a fascinating idea and likely to find favor. The time, too, the peace-year, is propitious. But there are obvious difficulties to be surmounted. It will be a nice point to decide just what shall be immortalized, and what left in oblivion. And, surely, some of the wonderful processions of the year should be included; for they have become, in fact, and for the time being, a part of our metropolis. Indeed, we think they cry out the more insistently to be recorded because of their fleeting and ephemeral nature. The architecture of London is fairly massive, and can afford to wait years, if may be; but we all hope that there will never be need again for many of the unique gatherings of soldiers and sailors of various nationalities that have at one time or another, this year, paraded through our streets, reminders to us stay-at-homes of the wonderful unity of the Allies. Anyway, the Camera Club has started a fund to cover expenses of the survey, and will be glad to receive subscriptions, and particulars will be forwarded to anyone who sends a stamped and addressed envelope to the Hon. Sec., 17 John Street, Adelphi, W.C. 2, London, England.

British films are again to the fore, and we hear that, for the first time since its birth, the British film-industry has found favor in the eyes of the big financiers of these islands. In America the kinema-industry ranks as the third largest in the country. In England the powers-that-be have not until recently recognized it as an industrial commodity. But the war has brought the British film to the front, for it simply *had* to be employed for propaganda work, and in many other ways officially. But despite the backward state of the film-industry here, and the difficulties of export during the war, British films have been sold to America (of all countries), Australia, Canada, South Africa, New Zealand, Holland, France, Scandinavia, Denmark, Greece, Italy, Egypt, China, the Straits Settlements, Malay, and India,—and, since the Armistice, the Belgian market has been entered. So it looks as if we are at last thinking of competing seriously for some of the film-business of the world, for although the market of the United Kingdom is big, there is a still bigger one waiting over seas.

Writing of the kinema reminds us that there seems no limit to the uses of the film. We hear that one is being prepared at the Zoölogical Gardens, London, for the Board of Agriculture, illustrating the damage done by rats, and it is to be exhibited all over the country. It is well known that rats have vastly increased during the war, and are costing the country £40,000,000 ($200,000,000) a year. Whether the film to fight the rats that is being prepared at the "Zoo" will prove an efficient weapon cannot be foretold; but it is certainly an illustration of the ever-widening influence and the adaptability to all sorts of purposes, of this branch of photography.

With Peace has not come Plenty. Everything is scarce from a cabbage to a camera, and we are all longing for a good harvest, especially of cameras. We hear that people pay exorbitant prices for second-hand cars, because they will have them at once; but they do not seem to do the same with cameras, and we had a terrible object-lesson of their scarcity, last week.

This village had a Fête, and there were all sorts of picturesque and most photographicable events in the pretty setting of a garden; but there were no cameras. Little village-children danced around a Maypole, and there were quaint, historic old Morris dances given by sixteen grown-up girls, eight in smocks and their partners in white muslin and green ribbons. There was also a Japanese playlet, acted out of doors; and a Russian dancer gave "Salome" on the lawn—all tempting enough subjects, surely, for the most jaded and *blasé* camera.

In the old days the girls in their smocks would have been dodging the snapshooters, and one would have been continually coming across groups being photographed by the professional men.

But the war has changed all that. The Morris dancers could walk about disappointingly unmolested by any impudent little Kodaker.

The professional photographer had written to say that her only camera was engaged at a wedding, and the photographic press-bureau 'phoned that as the day was not absolutely bright, it was not worth their while to spare a man. So this picturesque village fête must be unrecorded, so far as photography goes, and one can only hope that the camera-famine will soon be over.

XUM

RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER

THE following patents are reported exclusively for PHOTO-ERA MAGAZINE from the patent-law offices of Norman T. Whitaker, Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The Patents mentioned below were issued from the United States Patent office during the months of June and July, the last issues of which have been disclosed to the public.

Folding-Camera, patent, No. 1,308,985, invented by Austin Carl Fisher. Assigned to Eastman Kodak Company, Rochester, N.Y.

Fletcher Douthitt invented Method of Ascertaining Camera-Stops. Patent, No. 1,309,398.

Patent, No. 1,308,710, granted to Aron Hamburger, Mayfair, London, England, on Developing Coloring, and Washing-Tank for Two-Sided & Photograph Films.

Shutter-Controlling Mechanism for Film-Cameras, invented by Pedro Juan Besosa, New York, N.Y. Patent, No. 1,308,617.

Harry F. Prefontaine of Brooklyn, N.Y., invented Shutter-Operating Attachment for Cameras. Patent, No. 1,308,642.

Patent, No. 1,308,708, granted to Aron Hamburger, Mayfair, London, England, on Color-Photography.

Camera. Patent, No. 1,309,747, granted to Frank E. Russel of Batavia, N.Y.

Gilbert A. Betts of Topeka, Kansas, invented Method of Producing Photo-Engravings. Patent, No. 1,310,385.

Patent, No. 1,305,585, granted to Harvey L. Boyer, Philadelphia, Pa., on Camera.

Colored Image and Process of Producing the Same, invented by John I. Crabtree, Rochester, N.Y., assigned to Eastman Kodak Company of Rochester, N.Y. Patent, No. 1,305, 962.

Magnus Niell, Stockholm, Sweden, invented Photographic Camera, patent, No. 1,307,512.

Patent, No. 1,307,339, granted to Joseph Becker, Washington, D.C., on Focusing-Camera.

Photographic Shutter, invented by Friedrich A. G. Pirwitz, Rochester, N.Y., assigned to Eastman Kodak Company, Rochester, N.Y. Patent, No. 1,307,751.

Wernir Busch Larsen, Copenhagen, Denmark, invented Method of Making Screws for Use in Producing Half-Tone Negatives. Patent, No. 1,307,824.

Patent, No. 1,306,904 has been granted to Frederic E. Ives, Philadelphia, Pa., on Color-Photography.

Printing-Apparatus, patent, No. 1,307,325 has been granted to Donald R. N. Taylor, New South Wales, Australia.

John G. Capstaff, Rochester, N.Y., has invented Photographic Printing-Attachment, patent, No. 1,306,946. Assigned to Eastman Kodak Company, Rochester, N.Y.

Patent, No. 1,311,676 on Camera was granted to Alwin Beck of Rochester, N.Y., assignor of one-half interest to Harold S. Simms, Rochester, N.Y.

The Elements of Photography

WE have received a copy of the cloth edition of "The Elements of Photography" published by the American Photographic Publishing Co., Boston, Mass. This handy little volume is intended to be a manual for the beginner and includes a description of the fundamentals of photography with film and plate-cameras. The book is No. 8 in the *Practical Photography* series issued by the same publishers. The price, in cloth, is seventy-five cents; paper, thirty-five cents.

A Word from J. Herbert Saunders

J. HERBERT SAUNDERS, of Leeds, England, who won the first prize in the "Spirit of Spring" competition, has decided, emphatically, in favor of the PHOTO-ERA silver prize-cup. He states that, although he would prefer photo-supplies, which, in England, are so costly at the present time, he cannot forego the desire to have the silver trophy cup as a perpetual remembrance that he has won the first prize in the advanced competition.

"Curiously enough," he writes, "your letter, advising me of my good fortune in winning first prize, arrived on our Peace-Day Celebration, so that the PHOTO-ERA cup will be a pleasant reminder of two important events. . . . . .

"It is truly pathetic to meet so many disabled soldiers everywhere. I have just seen two poor fellows, one minus both legs and the other with two arms clean off. The legless man stops to take out a cigarette for the other poor boy, puts it in his mouth and then lights it for him. The Peace Decorations are fine, as such; but the sadness of the hour impels me this afternoon to seek the quiet of the country-side, there perchance to make a picture or two for PHOTO-ERA contests."

The Voyage of the Mayflower—Errata

THOUGH not really errors, some of the dates and figures given in the Editor's version of the voyage of the Mayflower (page 124) are subject to modification. They were derived from a reliable source; but no account was taken of the true difference between the old and modern calendars (Old Style and New Style). Thus, some historians set the date of the departure of the Mayflower from Plymouth, England, as September 6; others, by adding ten days (difference between old and new style) as September 16. Until 1769, the year of the first anniversary, at Plymouth, of the Landing of the Pilgrims, eleven instead of *ten* days (the true difference) were erroneously added. Hence, Forefathers' Day really falls on December 21, instead of December 22 as stated in the Editor's account. Again, when books of reference give 102 souls (56 men and 46 women) as the total number of Pilgrims on the Mayflower, they ignore the fact that these were not all adults, for 33 of them were boys and girls; but exactly as to how many of the 102 Mayflower passengers were boys and girls, nearly all the books differ. But these are minor details and not worthy of controversy.

Edith—"How do you like my new photographs, dear?"

Marie—"Why, one of them is very pretty and the other is quite a good likeness."—*Exchange.*

WITH THE TRADE

New Cooper Hewitt Catalog

THE many users of Cooper Hewitt Electric Lamps will be interested to obtain the new catalog No. 78-B just issued by the Cooper Hewitt Electric Company, Eighth and Grand Streets, Hoboken, New Jersey. In it are listed many types of direct and alternating current outfits for the photographer. The illustrations and technical information will appeal to amateur and professional photographers who use artificial illumination. Incidentally, it may be well to add that copies are sent free of charge to any individual or firm that is interested in artificial light for photographic purposes.

Geo. L. Barrows in Business for Himself

MR. GEORGE L. BARROWS, well known in the photographic field as the former American Agent for "Agfa" Products, announces his intention to go into the manufacture of these former imported products, as well as to handle imported photographic goods of special merit. His new company is known as the Sagamore Chemical Co. Inc., 120–122 West 31st St., New York City. We advise our readers to get in touch with Mr. Barrows for further information.

Buying Metals in Germany

BERLIN, July 30—It is reported that an agreement has been made between an important English syndicate and a Netherland firm, Blass & Groenewegen, of Utrecht, with the purpose of wholesale purchases from the German metal-industry of products for immediate exportation to England. This transaction is of great importance because it is apparent that through the continuous rise of the dollar-rate of exchange in London and the increasing industrial difficulties in England, British merchants have been compelled to apply for supplies of goods on the continent.—London Times-Public Ledger Cable Service. Copyright, 1919. All rights Reserved.

This item of news is of great importance to the platinum-paper industry, for on account of the great shortage of platinum the output of several well-known kinds of platinum-paper had to be greatly curtailed if not entirely stopped. On account of her nearness to Russia, and the chaotic condition that began to prevail in that country, several years ago, Prussia found means to acquire virtually the entire output of that precious metal, which is found preëminently in the Ural Mountains. When one considers that shortly before the war soft platinum was selling for about $100 an ounce and, during the past few years, at about $125 an ounce, it is easy to see who is responsible. The retail-price, at this writing, is $6.50 per pwt. or $130 an ounce, so that users of genuine platinum paper will understand the apparently high price of the product.

Something for Nothing in England

ANOTHER attempt on the part of a photographic society to obtain discounts or special terms on supplies for its members is recorded this month. We have no doubt that other manufacturers treated the inquiry in a similar manner to the pointed refusal of one large manufacturer and it is evidence of that kind of relationship between manufacturers and dealers for which both sides have been striving for years. A few days ago we received an application from the master of a school for a copy of our publication with rates for subscription. Our correspondent stated that he was organizing a photographic society at the school and he desired to see if it would be useful to them. We replied that the *Photographic Dealer* was exclusively a trade-publication and was not supplied to schools or photographic societies. Rightly or wrongly we have the feeling that it was the first step to an attempt to buy on preferential terms. So inherent is the desire for a bargain in the human race that it seems hopeless to endeavor to stamp out attempts of this kind, the only thing to do is to keep a united front against allowing discounts to any but *bona fide* traders and a close watch all the time.—*The Photographic Dealer.*

Demand for Historical Photographs

PHOTOGRAPHS that have an historical value, whether they are houses, localities, original portraits, furniture or various objects, are wanted by a prominent publisher of historical books. See advertisement in this issue. If a reader knows of any old professional studio likely to have negatives made many years ago, of such subjects, let him communicate that information to this publishing-firm and suitable compensation will not be lacking. Prices, including reproduction-fee, are $3 and upward for each print.

Rack and Pinion

SOME helpful hints with regard to the use and care of the rack and pinion movement are repeated from a recent issue of *The Amateut Photographer.* The movement is a familiar one in photographic apparatus, and is almost invariably the mechanism by which focusing is effected with a view-camera. The pinion is generally a steel-rod, fitted with a milled screw at one end, and fixed in position by brass-collars. The rod has grooves cut in it lengthwise. The rack is usually of brass, cut with grooves across its width. When properly adjusted the turning of the milled head should cause the pinion to revolve and engage successively with the grooves in the two racks over which it travels. Bad adjustment, strain, or wear, will frequently cause the pinion to travel badly, or to stick altogether, and sometimes to jump the teeth of the racks instead of engaging them smoothly and firmly. A little adjustment will often put matters right. It should be seen, first of all, whether the pinion lies truly in the corresponding grooves of the two racks, and is not a groove ahead at one end. If the pinion engages too loosely with the racks, so that it does not bite well and has a tendency to jump the grooves, the racks should be unscrewed and replaced with a strip of paper under each, sufficiently thick to raise it to the proper level. A slight trace of oil applied where the friction takes place is a further advantage.

XUM

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Bausch & Lomb Tessar II B, f.6.3. Good sunlight, stop f.8. One two-hundredth of a second. From contact print on 2½ x 4¼ negative. No retouching.

HE thinks he walks well! But the fast Anastigmat—the Bausch & Lomb Tessar II B, f. 6.3 or I C, f. 4.5, registers the infant unsteadiness, the uncertainty that lasts only days or weeks—and never comes again.

Years hence he and his parents will know anyhow that he *must* have walked that way once. And then come the priceless pictures that prove it.

It takes Tessar speed and definition to *get* every shade of expression, the twist of each little hair, the poise of a foot, the gesture of a hand or finger, the sparkle of the baby eye—all *blurlessly* and fully timed.

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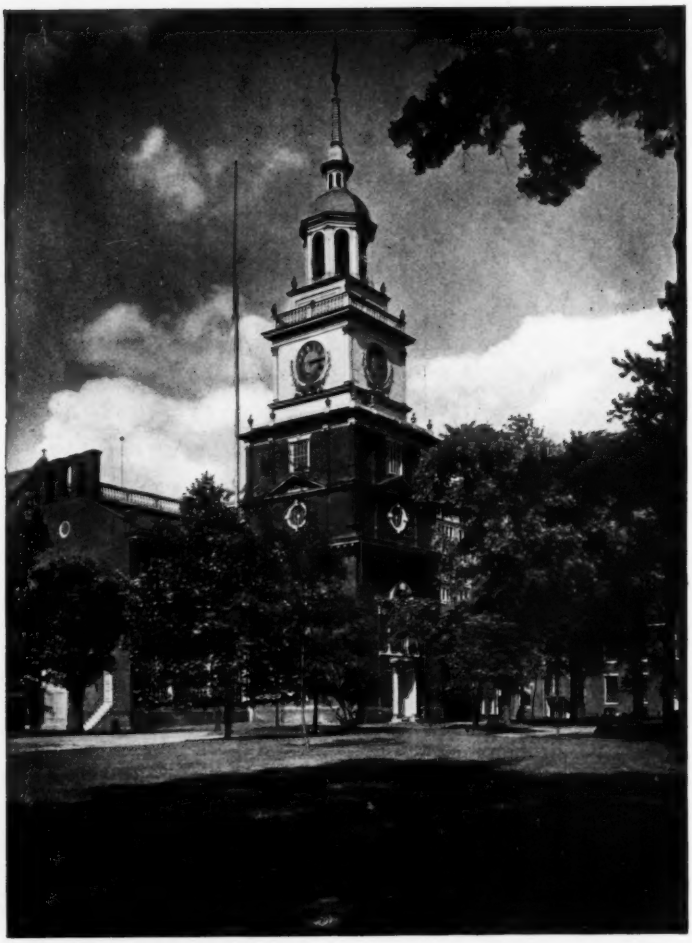

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